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ATKIN'S
POCKET COMPASS

OF THE

Harbors, Ports, Lighthouses, and Buoys

OF

LAKE ONTARIO

*8
Pilots*

And River St. Lawrence.

BY FRANCIS F. ATKIN.

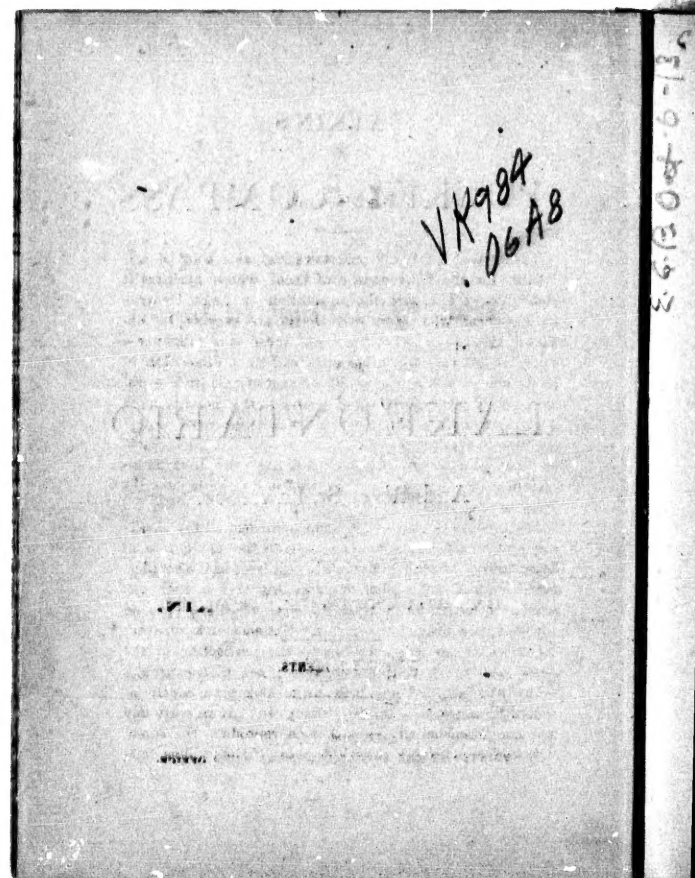
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PREFACE.

The need of a reliable pocket manual, as a book of reference, for the convenience of those whose business is closely connected with the navigation of Lake Ontario, has long been felt. Maps and charts are easy to be obtained, but we are not aware that there is in existence a single work upon the subject, of sufficient dimension to be carried upon the person. The object of this little work, is to supply this long felt need. Should the mariner be in doubt as to a particular point on the lake, he need not go through a labyrinth of documents to establish the correctness of the matter in question, but has only to take his bearing from the "Pocket Compass," and in an instant the point is settled.

The aim of the author has been to furnish all the necessary general information, pertaining to the navigation of Lake Ontario, which is absolutely required, in the smallest possible space. The labor of producing such a work can scarcely be estimated, nor has the present edition proved any exception to the general rule. Patience and persevering effort, however, has resulted in the production of the work, and the flattering reception given to the project even while in its infancy, leads us to look for a continuation of the same, now that it is complete. At an early day it is the intention of the author to reproduce the same with additional features, such as plans of the various har-

bors, and extending over a greater sphere, additional shipping intelligence, &c., &c. The author feels under great obligations to the gentlemen, whose extended experience has been so kindly lent, in furnishing statistics, assisting in corrections, &c.; among whom may be mentioned, Col. J. M. Wilson of the Engineer Corps, Oswego, granting examination of plans; Capt. Pearson, Pilot of the Revenue Cutter Chase; Col. G. L. Gillespie, Chairman of the Light-house Board, Buffalo; and Capt. Gibson, Oswego.

The following gentlemen in Canada likewise have our thanks for information and services rendered. Superintendent of the Welland Canal; R. J. Chisholm, Oakville; Capt. F. Gibson, Darlington; Capt. Davis, Harbor Master Cochrane, Port Hope; Messrs. W. Shannon, J. Bawden, Capt. McGiven, and Hannah, Kingston; Mr. J. London, and Harbor Master Walters, Belleville.

The work is submitted to the navigators of Lake Ontario with full assurance of its correctness, and the consciousness of its ability to supply the wants of such a work so long looked for.

Oswego, April, 1871.

PORT OF OSWEGO.

Oswego, the most important commercial harbor upon Lake Ontario, is a city of about 25,000 inhabitants, situated at the mouth of the Oswego River, the stream dividing the city in two nearly equal parts. The river is bordered on each side by a ridge, which rises in gradual slopes to a height of about 100 feet, and ends in bluffs upon the lake shore, from 40 to 60 feet high. The mouth of the river admits vessels of as large a class as can pass through the Welland Canal, and the extension of the West pier to a distance of 550 ft. in the lake, with the raising of the Lighthouse by the United States Government, renders the harbor one of the safest on the lake, combining both Canal and Railway transportation with

the advantages of position as the nearest lake port to tide-water. A Hydraulic Canal—extending both sides of the river—is studded with Mills, Elevating Warehouses, and other manufacturing establishments. The commerce of Oswego is very extensive, and is increasing rapidly. Situated near the foot of the lakes, and nearer New York than any other lake port, it has commercial facilities superior to most Western cities. A large proportion of the produce of the West flows through this port to the seaboard markets, and it is the principal entry port of the agricultural products of Canada West. The salt manufactured at Syracuse and Salina is mostly distributed through the great West from this Port; and vast quantities of manufactured goods from the East are also sent through this channel. The Lumber trade of the city is likewise immense.

The city has the advantage of being the terminus of three railroad lines, and on the completion of the Portland, Oswego and Chicago road—the building of which is a

foregone conclusion—will possess still greater commercial advantages in a direct communication with the Atlantic coast. The New York & Oswego Midland Railroad, as well as the Delaware, Lackawanna & Western, communicate directly with New York, while the Oswego & Rome road connects with the New York Central at Rome. It is the intention of the Midland Railroad Company to build an artificial harbor, by which merchandise can be loaded direct from the vessels into cars, and transported to its destination without transshipment. This Company is erecting, in the East Cove, docking and trestle work for the convenience of vessels loading with coal at this point. Oswego has become so largely identified with the coal trade, through the medium of her railroads, extending directly to the coal fields, that this is deemed a positive necessity by the Company. The length of dock is 466 feet, and will be arranged with 11 pockets at present, each pocket holding 100 tons of coal, the number to be enlarged in the future

to 36. The trestle work will be 700 feet long. Three vessels can load at the same time ; depth of water being 14 feet at low water. The railroad track will be constructed 40 feet above the water.

Additional facilities for the transportation of coal are offered by the Delaware, Lackawanna & Western Railroad Co., which has recently extended its tracks to the docks and erected thereon a trestle of sufficient dimensions to accommodate an immense traffic. This line being in direct communication with the mining regions, and being very largely interested in the traffic of the article, is enabled to transport coal direct to the city, and affords every facility for loading vessels. The trestle is, at present, sufficient for all ordinary demands, but is capable of indefinite enlargement, should occasion require. This trestle is situated on the West side of the harbor, directly above the draw-bridge.

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and the stimulus of the lines of internal im-
provement, both the commerce and manu-
factures of the City of Oswego have increased
in an almost unprecedented manner, and
there is every reason to believe that this in-
crease will be continued for many years to
come.

Signal Station.

At Oswego is situated a government
signal station, where daily meteorologi-
cal observations are taken of the force
and direction of the wind, &c., &c. This
system, but lately inaugurated by the
Government of the United States, is des-
tined to be of valuable service to mari-
ners. Observers are placed at the prin-
cipal cities of the Union, especially upon
the Northern lakes, whose duty it is to
report several times daily, the state of
the weather in their particular locality.
Notice of foul weather is immediately
telegraphed to the various stations, the
direction and velocity of the wind being
given, from which predictions are

readily made concerning the probable state of the elements for a considerable time. The system has long been used with great success in Europe, and will soon make equal progress in this country.

Oswego Harbor.

A very strong current runs out of this port in the spring and fall, which renders it difficult for vessels to work in against a head wind. To obviate this, Oswego possesses a large fleet of powerful tug-boats that go outside in almost any weather and tow vessels safely into port.

The following is the depth of water in the Coves and at the different docks. Soundings were taken March 11, 1871, when the water was very low :

EAST COVE.		WEST COVE.	
Depth of water at docks in the		Depth of water at docks in the	
East Cove.....	10 to 12 ft.	West Cove.....	9 to 12 ft.
Coal dock.....	8 " 12 "	Salt dock.....	10 " 11 "
Marine Elevator..	12 " 14 "	N-West'n Elevator	9 " 13 "
Merchants' ..	10 " 12 "	Northern T. Line..	10 " 12 "
Columbia ..	12 " 14 "	Old Oswego Line..	9 " 12 "
Washington ..	10 " 12 "	Del., Lac'wanna R.	10 " 12 "
Corn Exchange ..	10 " 12 "		
Continental ..	12 " 14 "		
Reciprocity ..	10 " 11 "		
Lake Ontario ..	10 " 11 "		

Piers and Docks.

Many changes have been made to the docks and piers in this harbor during the past two seasons. The West pier has been extended 550 feet into the lake, in a northerly direction, which breaks the heavy Northwest seas, and makes it less dangerous to vessels entering this port when coming down the lake.

The Messrs. Rathbun & Co., and Middlebrook & Powell, two of the most enterprising lumber dealing firms in the city, have built new docks in the West Cove, in order to meet the increased demand for dockage. Mr. S. Doolittle has also completed a new dock, which extends from the bridge 550 feet in a northerly direction, is 30 feet wide, and capable of holding 2,000,000 feet of lumber.

Lighthouse.

The lighthouse is situated on the West pier, and is 550 feet southerly from pier-head light. About 20 feet was added to the present lighthouse last year, and it is now 73 feet in height, displaying a **FIXED BRIGHT**

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..... 10 " 11 "
rator 9 " 13 "
..... 10 " 12 "
..... 9 " 12 "
..... 10 " 13 "

LIGHT, and can be seen at a distance of 20 miles. A pier-head lantern, displayed on a spar, with a FIXED LIGHT, is placed on the end of the new extension of the West pier, to guide vessels clear of it.

Courses and Distances.

FROM OSWEGO TO KINGSTON:

Due N will take inside Real Ducks to Nine Mile Point on Simcoe Island, which has a fixed light, distance 34 miles; from thence to Kingston, N-E. Distance 9 miles.

N $\frac{1}{2}$ W, which is the best course, will take to mid-channel between the Real and False Ducks, distance 34 miles; thence N-E by N $\frac{1}{2}$ N to Simcoe Light. Distance 22 miles.

FROM OSWEGO:

- To anchorage to the Eastward of Real Ducks, N. Distance 25 miles.
- " " " Upper Gap, Bay of Quinte, N $\frac{1}{2}$ W. Distance 40 miles.
- " " " Anchorage on South Bay Point, N by W $\frac{1}{2}$ W. Distance 31 miles.
- " " " Outside of Galloo Island Shoal, N $\frac{1}{2}$ E. Distance 31 miles.
- " " " Channel between Little Galloo and Little Stony (Calf Island), N by E $\frac{1}{2}$ E. Distance 23 miles.
- " " " Stony Point Light, N N-E. Distance 20 miles.
- " " " Long Point Light, N-W $\frac{1}{2}$ W. Distance 43 miles.
- " " " Scotch Bonnet Light, N-W by W $\frac{1}{2}$ W. Distance 61 miles; thence to Presqu' Isle Harbor, N N-W. Distance 11 miles.

Courses and distances are taken from Capt. Ford's chart.

Courses and Distances.

(CONTINUED.)

FROM OSWEGO:

To Braddock's Point, W $\frac{1}{2}$ S. Distance 64 miles.
 " " Devil's Nose, W $\frac{1}{2}$ S. Distance 79 miles.
 " " Thirty Mile Point, W, distance 104 miles;
 from thence to Niagara River, W S-W,
 distance 30 miles; from Niagara River
 to Welland Canal, W S-W, distance 19
 miles.

Caution—Charity Shoal.

From mid-channel, between Beal and False Ducks, to Charity
 Shoal, N-E $\frac{1}{2}$ E. Distance 13 miles.

From anchorage under Beal Ducks to Charity Shoal, N-E by
 N $\frac{1}{2}$ N. Distance 13 miles.

From Tibbett's Light to the foot of Charity Shoal, W S-W.
 Distance 7 miles.

From the head of Grenadier Island to Charity Shoal, W $\frac{1}{2}$ N.
 Distance 6 miles.

Courses and distances are taken from Capt. Ford's chart.

LITTLE SODUS.

Little Sodus, situated 15 miles S-W by
 West of Oswego, and within 5 miles of the Big
 Bluffs, has only one pier 1,200 feet in length,
 and 7 feet high at low water. This pier is
 on the West side of the channel, and vessels
 making this harbor should give West pier a
 berth of about 25 feet. The width of the

channel is 75 feet; depth at low water, 9 ft.; at ordinary water, 11 ft., along the pier. Inside the bay there is good anchorage with an average of 40 feet water.

The Bar.

A bar extends from the East side of the bay towards the South end of the pier, and has only one foot of water on it. No light-house.

Courses and Distances.

FROM OSWEGO:

To Little Sodus, S-W by W. Distance 15 miles.

Courses and distances are taken from Capt. Ford's chart.

BIG SODUS.

Thirty miles S-W. by W $\frac{1}{2}$ W. of Oswego, and 30 miles E. $\frac{1}{2}$ N. of Genesee River, is Big Sodus Bay, and is one of the best harbors for refuge on the American side of Lake Ontario. There are two piers, extending North and South, the West one is 1,400 feet, the East one 950 in length, and connects with Point Charles by a breakwater 1,000 feet long. The height of these piers

above low water is 6 feet. The channel is 470 feet wide, and the depth of water at the outer end of West pier is 12 feet, and at the outer end of the East pier there is only 6 feet of water.

Danger.

West of the East pier at the south end there is a shoal, which occupies half the width of the channel, with only 3 feet of water on it. Another shoal also runs off from the inner end of the West pier about 200 feet, which is in a direct line towards the spit, opposite, thus rendering the Western part of the harbor unnavigable.

Range Lights.

The range lights are on the shore end of the West pier, the foremost RED, and the rear one WHITE, and are visible about 3 miles respectively. Vessels coming in should keep the West pier close on the starboard hand, continuing on to mid-channel between the inner end of West pier and the sand spit opposite, where good anchorage can be had, or go round the end of the point

On a bluff about $\frac{1}{4}$ of a mile West of the West pier-head, is erected the main lighthouse, showing a FIXED LIGHT varied by FLASHES.

FROM OSWEGO:

To Big Soda, S-W by W $\frac{1}{2}$ W. Distance
30 miles.

				To Presqu' Isle, N-W by N $\frac{1}{2}$ N. Distance 60 miles.
"	"	"	"	Whitby, N-W by W $\frac{1}{2}$ W. Distance 100 miles.
"	"	"	"	Toronto, W by N $\frac{1}{2}$ N. Dis. 116 miles.
"	"	"	"	Mid-channel between Real and False Ducks, N by E $\frac{1}{2}$ E, distance, 50 miles, thence N-E by N $\frac{1}{2}$ N to Simcoe Light. Distance 53 miles.

Courses and distances are taken from Capt. Ford's chart.

PULTNEYVILLE.

Thirty-nine miles West by South : South of Oswego, and 23 miles East by North of Charlotte is Pultneyville. The principal shipping business at this port is done by small coasting vessels. This harbor is not yet completed, and at present consists of only two wharves projecting from the shore. The East one is 500 feet, with 12 ft. water, and the West one 200 feet in length and 7 feet water. Vessels drawing 7 ft. can take refuge in the inner harbor, entrance to which is 500 feet Westerly from the West wharf, and 1,000 ft. Westerly from the East one. This harbor is now being improved, and 200 ft. will be added to the West pier this present season, (1871) Congress having made a liberal appropriation for that purpose. It is also proposed to dredge the inner basin to 12 feet water, and when finished will afford excellent shelter. No light.

Courses and Distances.**FROM OSWEGO:**To Pultneyville W by S $\frac{1}{2}$ N. Distance 39 miles.

Courses and Distances.

(CONTINUED.)

FROM FULTNEYVILLE :

	To Thibbets' Light, N-E $\frac{1}{2}$ N.
	Distance 78 miles.
" "	" Toronto, W by N $\frac{1}{2}$ N. Dis-
" "	tance 103 miles.
" "	" Mid-channel between Real
	and False Ducks, N-E by N
	$\frac{1}{2}$ N, Distance 56 miles ;
	thence N-E by N $\frac{1}{2}$ N to
	Simcoe Light, Distance 22
	miles.

Courses and distances are taken from Capt. Ford's chart.

CHARLOTTE.

This port is 60 miles W by S $\frac{1}{2}$ S of Oswego, on the West side of Genesee River. There are two piers, each 2500 ft. long, running N. and N-E. into the lake and are 450 ft. apart. Depth of water at outer end of West pier, 12 feet; outer end of East pier, 10 feet. Height of West pier above low water, 8 $\frac{1}{2}$ feet; East pier, 10 feet. When entering the harbor, keep to the center of channel till opposite the Iron Works, which is half a mile from beacon light. From this point the

channel is 300 feet wide, and runs parallel with the West wharf. The depth of water is from 12 to 15 feet at low water.

Caution.

Along the line of both piers are sunken piles, scattered along their entire length.

Lighthouses.

BEACON LIGHT.—On the West pier, 250 feet from the North end, is a small WHITE LIGHT, 28 feet high, and is visible 6 miles.

THE MAIN LIGHT.—Is $\frac{1}{2}$ of a mile inland, erected on high ground, is 83 feet high, showing a FIXED WHITE LIGHT, and can be seen at a distance of 16 miles.

Courses and Distances.

FROM OSWEGO:

To Charlotte, (Genesee River) W by S $\frac{1}{2}$ S
Distance 65 miles.

GENESEE RIVER:

- " " To Toronto W by N $\frac{1}{4}$ N. Distance 85 miles.
- " " Whitby, N-W. Distance 75 miles.
- " " Presque Isle, N $\frac{1}{4}$ E. Distance 56 miles.
- " " Long Point Light, N-E by N $\frac{1}{4}$ N. Distance 46 miles.
- " " Mid-channel between Real and False Ducks N-E, distance 68 miles; from thence to Simcoe Light, N-E by N $\frac{1}{4}$ N. Distance 22 miles.
- " " Galloo Light, N-E $\frac{1}{4}$ E. Distance 75 miles.

Courses and distances are taken from Capt. Ford's chart.

OAK ORCHARD.

Oak Orchard is 100 miles Westerly of Oswego, and 23 miles West of Charlotte. Two piers run out from this place North and South into the lake 1,000 feet, the West pier extending 100 feet further than the East one. Distance between piers 180 ft. Their height above low water, 6 ft.; depth at the end of the piers, low water, 9 ft. Good anchorage inside. A light house is in process of construction, and work is also being done on the piers, several appropriations having been made for that purpose. It is also designed to dredge the channel between the piers to 12 ft. water, and when all is completed Oak Orchard will form an excellent harbor of refuge.

The Bar.

There is a bar across the entrance of this harbor with about 7 ft. at low, and 9 ft. at ordinary water.

Courses and Distances.

FROM OSWEGO:	To Oak Orchard W. Distance 100 miles.
" OAK ORCHARD:	To Toronto, W N-W. Distance 24 miles.

Courses and Distances.

(CONTINUED.)

FROM OAK ORCHARD:

To Mid-channel between East and
False Ducks, N-E by E $\frac{1}{2}$ E,
distance 66 miles; thence N-E
by N $\frac{1}{2}$ N to Simcoe Light. Dis-
tance 12 miles.

" " " Gull Light (between Cobourg and
Port Hope), N. Distance 45 miles.

Courses and distances are taken from Capt. Ford's chart.

ALCOTT.

Alcott Harbor, or 18-Mile Creek, is 112 miles West of Oswego, and 18 miles East of Niagara River. The entrance to this harbor is bounded by two piers, extending North and South, both of which are 600 feet long and 200 feet apart. Their height is 6 feet above low water; between piers is 11 ft. water, and good anchorage. Vessels going into this harbor, drawing 6 feet, when the water is low, can pass through by keeping West pier close aboard. It is intended to extend these piers 300 feet, then giving 12 feet of water, and to dredge the channel and inner

basin to the same depth. About 400 feet East of the East pier, a wharf extends into the lake 250 feet, with a depth of 5 feet water at its end.

There is no light at this place.

WILSON.

Twelve miles East of Niagara River, and 120 miles West of Oswego, is the small port of Wilson. There are two piers at this place. The East one is 600 feet in length from its outer end to the storehouse. The West pier is about 300 ft. long, but is in poor condition. Vessels going into Wilson must keep the East pier close aboard. The depth of water, from the outer end of the East pier to the storehouse, is 8 feet. There is a small basin inside, with the same depth of water. No light.

NIAGARA RIVER.

The mouth of this river is 1,000 yards in width, averaging from 20 to 40 feet of water,

and affords very easy entrance for shelter. When making this harbor, in the day time, from the lake, stand up until abreast of the RED STORE HOUSE, in Youngstown, and steer right in mid-channel, which clears everything.

On entering this river at night, keep near its centre, bringing Fort Niagara to bear S-E by S. When W. or W. by S. of the Fort, the shores become bold, and may be approached to within a short distance, especially on the East side.

When the wind is from the North'ard, it causes a rough, short chopping sea on the bar.

Danger.

North-West of Fort Niagara there is a shoal, running into the lake for about one mile, which has only 5 to 6 ft. water on it. On the West bank, under Fort Mississauga, is another shoal, extending about half a mile North-East, and two miles North-West of the Fort.

Anchorage.

Good anchorage can be had close in under Youngstown, on the American side of the river; also on the Canadian side directly opposite to the last named place.

Lighthouse.

The lighthouse, erected on the top of Fort Niagara, is 78 feet high, and is built on the East side of the mouth of Niagara River. The light is BRIGHT AND STATIONARY, and, in fine weather, can be seen at a distance of 14 miles.

Courses and Distances.**FROM NIAGARA RIVER:**

			To Fort Dalhousie, W S-W. Distance
			13 miles.
"	"	"	Burlington Canal, W by N. Distance 35 miles.
"	"	"	Oakville, N-W by W $\frac{1}{4}$ W. Distance 35 miles.
"	"	"	Toronto, N by W $\frac{1}{4}$ W Distance 31 miles.
"	"	"	Gull Light, (between Cobourg and Fort Hope), N-E $\frac{1}{4}$ N. Distance 34 miles.
"	"	"	Long Point, E by N $\frac{1}{4}$ N. Distance 100 miles.
"	"	"	Mid-channel between Real and False Ducks, E by N $\frac{1}{4}$ N. distance 120 miles, thence N-E by N $\frac{1}{4}$ N to Simcoe Light. Distance 23 miles.

Courses and distances are taken from Capt. Ford's chart.

PORT DALHOUSIE.

This is one of the most important ports on the Lake. All vessels bound to or from the Upper Lakes are obliged to pass through the Welland Canal. It is easily made in any weather, and with any wind, there being no shoals or other dangers to "pick" a vessel up, when coming into this port. When working in, the only care is to guard against stretching too far in to the Westward of the West pier. The piers run N. and S. to the bend, thence to the lock N. E. and S.-W. ; they are 3,000 feet long, and 200 feet apart. Average depth of water, 12 feet.

Lighthouse.

The Lighthouse is built on the end of the East pier, showing a REVOLVING BRIGHT LIGHT.

For courses and distances, see Niagara.

BURLINGTON CANAL.

Hamilton is at the head of Lake Ontario, separated from the lake by a long, low ridge

of sand and gravel, which stretches across from the Northern to the Southern shore in a S. S-E direction, forming a large bay, and is called Burlington Bay, the entrance to which is by means of a canal, about half a mile long, with an average width of nearly 200 feet. The entrance to the canal, from the lake, is 250 feet in width. There are two piers, the South one is nearly half a mile in length, and runs for a considerable distance N-E $\frac{1}{2}$ E, and then N-E by N. The North pier is about 300 feet shorter than the South one, and also lays N-E $\frac{1}{2}$ E. When making the canal at night, keep the lights on a range till pretty well up to the pier, then keep to the Northward of them, about handspike width going in, which will take right to mid-channel. The course from the piers to the Great Western Railway dock is W S-W, distance 5 miles.

A current runs in and out of the canal about once every twenty minutes, but when the wind is heavy, the current runs in and out every five or ten minutes.

Caution-Shoal.

A Shoal or Bar runs off to the Eastward from Brown's Dock, and extends nearly half a mile; and when the water is low, has only 7 feet of water on it. A red spar buoy is placed on the North end of this shoal, and vessels to clear it have to keep to the North side of the buoy.

Anchorage.

There is good anchorage on either side of the channel piers in Burlington Bay. The deepest water is on the North side. On the South side the water is not quite so deep, but yet all vessels can bring up with perfect safety.

Lighthouse.

The main lighthouse is midway on the South pier, and shows a **FIXED WHITE LIGHT**, which can be seen at a distance of about 15 miles.

Range Light.

A small range light is within 20 ft. of the East end of the South pier, which also shows a **WHITE LIGHT**, and can be seen from the deck of a vessel about 5 or 6 miles.

Courses and Distances.

FROM 08WS240:

To Burlington Canal, W. Distance 161 miles.

FROM BURLINGTON CANAL:

To Toronto, N.E. Distance 35 miles.

Whitby, N-E $\frac{1}{2}$ E. " 90 "

Long Point, E by N & N. Dis-

Courses and distances are taken from Capt. Ford's chart.

WELLINGTON SQUARE.

Three miles to the Northward of Burlington Bay Canal, is Wellington Square, but when the wind is from the N-E or S-E, it affords scarcely any shelter to vessel craft. There are three small piers erected for the convenience of vessels to load and discharge cargo, which run North and South. The East pier is 100 feet in length, with only one navigable side, which is the West, the East side of this pier being partially blocked up with gravel. The centre pier is 300 feet long, with an average depth of 10 to 8 feet of water. The West pier is 400 feet long, with the same depth of water as the centre pier. There is good holding ground off

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either of the piers, in about 8 fathoms of water, and vessels can lie there comfortably, except when the wind is from the N-E. or S-E. No lighthouse.

WELSON.

The above small port is situated one mile to the East of Wellington Square, but it is very exposed ; there being but one pier. The length of the pier is 100 feet, with 9 feet of water at the outer end, and 7 feet at the inner end. No light.

BRONTE.

Bronte is about five miles to the Eastward of Wellington Square. It is in an exposed situation, and vessels can only lay at Bronte when the wind is off shore. There is only one pier, which is 400 ft. long, with an average depth of 6 ft. of water. No light

OAKVILLE.

The Port of Oakville, or Oakville Harbor, is 26 miles S-W. by W. & W. of Toronto, and 8 miles N. E. by N. of Burlington Bay Canal.

The piers, at Oakville are 110 feet apart, running nearly N-W and S-E in the lake, into 14 feet of water. Within there is a basin, which, if dredged, would afford excellent shelter to a large fleet of vessels. As it now exists, there is but one channel, 100 feet wide, with 8 feet of water.

Dangers.

Between Oakville and Port Credit there are two points, called Griggs and Marigold, which extend upwards of half a mile into the lake, and it is not safe to approach nearer than one mile. Between Points Griggs and Marigold, and the Burlington Bay Canal, there is another point, which is called Bray's Point, and extends fully three-quarters of a mile into the lake, which also requires a wide berth.

Lighthouse.

The lighthouse is built on the East pier, and is 45 ft. high from the water. The light at this port is very good, being a WHITE LIGHT, and can be seen at a distance of 14 or 16 miles in fine weather.

Courses and Distances.**FROM OSWEGO:**

To Oakville, W & N. Distance 146 miles.

" OAKVILLE

To Niagara, N-W by W & W. Distance 82 miles.

To Long Point, E & N, distance 116 miles ;

Courses and distances are taken from Capt. Ford's chart.

PORT CREDIT.

This port is 20 miles S-W. by W. of Toronto, and 8 miles N-E. by N. of Oakville. There are two piers at the Credit, which extend into deep water. Within there is a large basin, and by the judicious use of a dredge, would accommodate a large fleet of vessels.

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Caution.

About 4 miles East of this port—near the high bluff—large boulders exist, extending nearly three-quarters of a mile in the lake, and vessels passing should give this place a good wide berth.

NOTE.—The above point of danger is not laid down on the chart.

Lighthouse.

The lighthouse is on the E. pier, low and bad, and not even lighted with that regularity which the safety of vessels trading to the port absolutely demands.

Courses and Distances.

FROM OSWEGO:
To Port Credit, W & N. Distance 155 miles.

FRENCHMAN'S BAY.

This port has three names. By some it is called Liverpool, or Pickering, but is better known as Frenchman's Bay, and is situated about 26 miles N-E $\frac{1}{2}$ E of Toronto. This harbor is formed by a deep bay running into the land, which is separated from the lake

by a sandy or gravelly beach, through which a canal is cut 100 feet wide. The harbor is well sheltered on account of its land-locked position ; but the anchorage is not first-class on account of weeds. The depth of water at the outer mouth, between the piers, 11½ feet ; at the inner mouth, 7½ feet. In order to keep the water at the above depths, the harbor is dredged every spring and fall. A current runs in and out of the canal once in every four minutes.

The Light

At this port is a **FIXED WHITE LIGHT**, and is situated on the East pier ; but cannot be seen any great distance, and is only lighted when a vessel is expected to load or discharge cargo.

Courses and Distances.

FROM OSWEGO :

To Frenchman's Bay, W by N ½ N. Distance 122 miles.

" FRENCHMAN'S BAY :

To Long Point, E ½ S. Distance 65 miles.

Courses and distances are taken from Capt. Ford's chart.

WHITBY.

Whitby harbor is six miles to the Eastward of Frenchman's Bay, and 30 miles N-E by E of Toronto. This harbor is considered one of the best on the North shore of Lake Ontario. Standing as it does, near the centre of a deep bay, between Raby Head on the East, and Scarboro' Heights on the West, and of easy entrance. A strong breakwater forms the harbor, which stretches across the head of the bay, separating it from the lake, enclosing an excellent basin. The entrance is at the Eastern extremity, between the piers running South, a good distance into the lake, and are 250 ft. apart. The water in the channel is from 9 to 10 ft.

If the wind is blowing fresh from the S S-E or S-W when coming into this harbor, steer for the new Elevator, keeping as close to it as prudence will permit.

Danger.

About mid-way between Whitby and Frenchman's Bay, there is a nasty shoal in

shore, about one mile West of the Township line, which can be known by a line of poplar trees. A berth of 14 miles should be given this shoal.

Anchorage.

Good anchorage can be had in any part of the basin. The bottom being mud and plenty of water.

Lighthouse.

The lighthouse is built on the end of the West pier, which runs a little further into the lake than the East one, and has a **FIXED WHITE LIGHT**, which can be plainly seen about 10 or 12 miles off, when coming down the lake, but cannot be seen so far when approaching from the East, on account of the high land, three miles below Whitby, which hides it from view.

Courses and Distances.

FROM OSWEGO:

To Whitby, W by N $\frac{1}{2}$ N. Distance 118 miles.

" WHITBY:

" " To Toronto, S-W $\frac{1}{2}$ W. Distance 30 miles.

" " Burlington Canal, S-W $\frac{1}{2}$ W. " 68 "

" " To Genesee River, N-W $\frac{1}{2}$ W. Distance 74 miles.

" " Long Point Light, E $\frac{1}{2}$ S. Distance 60 miles.

Courses and distances are taken from Capt. Ford's chart.

OSHAWA

Six miles East of Whitby, is the port of Oshawa, situated in the bend of a small bay, with only one pier, 400 ft. long, which runs from the main land into the lake, with 10 feet of water. Oshawa is well secured from any wind, except Easterly or Southerly.

Danger.

The East point is called Oshawa Island, which bears S. by E. from the pier, the water there is shallow, on account of a large reef of "hard-heads," which extends into the lake S-E for nearly 400 yards. This danger requires a good berth.

Anchorage.

There is good anchorage about three cable lengths S. S-W. of the pier.

The Light.

A Red Storehouse is on the South end of the pier, and directly under the angle of the roof is placed a lamp, to answer the purpose of a lighthouse, but is not regularly lighted. It is only lighted when a vessel is expected at Oshawa to load or discharge cargo.

DARLINGTON.

This port is the place of entry for Bowmanville, and is 40 miles N-E. by E. $\frac{1}{2}$ E. of Toronto, and 26 miles W. $\frac{1}{2}$ S. of Cobourg. There are two piers at Darlington, which run N. and S. The West pier is 325 feet in length, and extends 50 feet further South than the East pier, thereby breaking the roll of the lake from the South-west. The distance between the piers is 150 feet; the depth of water at the outer end of the piers is 12 feet. Vessels drawing 9 ft. of water, can pass into the harbor and lay comfortably in the inner basin from any wind. Darlington is a good place to take with Westerly winds; but when the wind is Easterly, and vessels coming into this harbor, they require to keep up their after canvass, and keep the East pier close aboard, as the water shoals along the West pier. An East wind causes a heavy sea at the entrance, but none with a Westerly wind. The course from Oswego to Darlington is W. N-W. Distance 100 miles.

Lighthouse.

The lighthouse was burned down in the Fall of 1870, but was immediately re-built the same year, and is on the East pier. The lighthouse is 54 feet high, and displays a BRIGHT FIXED LIGHT, and can be seen at a distance of 10 miles. See Errata p. 44

NEWCASTLE.

Six miles E. by North of Darlington, is the port of Newcastle. It has two piers, and at present, a vessel could not take Newcastle, as the inner end of the West pier is not quite finished, but will be completed this season, (1870,) and when all is concluded, Newcastle will be a splendid harbor to enter, the piers being built a good distance apart.

Lighthouse.

The lighthouse at Newcastle is 25 ft. high and erected on the East pier. The light exhibited at this port, facing the lake, is RED ; but from the East and West side, the light is BRIGHT, and can be seen at a distance of about 5 to 6 miles.

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ERRATA.

DARLINGTON LIGHTHOUSE.—Through mistake in printing, the description of the above Lighthouse was made to read: "The Lighthouse is 54 feet high, and displays a bright fixed light." It should read: The Lighthouse is 54 feet high, and shows from the south a RED light, and approaching from the east and west a WHITE light.

NEWCASTLE LIGHTHOUSE.—The light exhibited at Newcastle Lighthouse should read a WHITE FIXED light, in place of the description given.

Also in the sixth line under the heading Newcastle read 1871 instead of 1870.

The Peach Stone.

Four miles East of Newcastle is the Peach Stone boulder, which extends nearly three-quarters of a mile into the lake, and requires a good berth.

PORT HOPE.**The Old Harbor.**

Twenty-three miles E. & N. of Darlington is Port Hope Harbor, which is formed by piers running parallel. The East pier has been extended 200 ft., which was completed in 1870. The lighthouse was removed to the end of the new addition, and is about 60 feet in height, and shows a good, clear, bright light, and on a fine night can be seen at a distance of about 15 miles. The depth of water at the mouth of the harbor is about 20 feet, and averages from 10 to 9 feet between the piers. After passing the lighthouse, the anchor can be let go, and the vessel brought up with perfect safety. At night the harbor is always kept clear (by the Harbor Master's order) to enable vessels making this port to have a clear passage. When

coming in, with the wind Easterly, always keep up a portion of the mainsail, which will take the vessel in, clear of the middle pier. Entering with the mainsail down, the vessel is sure to fall off, and very often strike the middle pier.

The New Harbor.

The new harbor was completed in 1870, which consists of crib work run into the lake at a distance of 200 feet, on the West side of the middle pier belonging to the old harbor. Near the center of this new pier a strip projects out, which is called the T. After passing this projection, the anchor can be let go with safety, if a line cannot be got out in time to snub. For courses, see Cobourg.

COBOURG.

Cobourg harbor is 7 miles East of Port Hope, and is composed of two basins. About the middle of the harbor, a pier 150 feet in length, running East and West, from the East pier, resembling a T, divides the harbor into two basins. Vessels once inside

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of this projection, are perfectly safe from any wind. A heavy gale, from the S-W, generally throws up a shifting bar of sand, rendering the entrance hazardous to vessels of deep draft. The width of the harbor, at the mouth, (between piers,) is 135 feet, and the depth of water from 11 to 13 feet, in good weather ; but when a heavy sea is rolling in, the depth of water averages about 8 feet



Caution.

When coming into Cobourg, especially at night, Captains should take care not to approach too near the South end of the West pier, as there are a number of broken piles extending for a considerable distance further into the lake than the East pier.

Lighthouse.

The lighthouse of this port is erected on the East pier, and is about 25 feet high, showing a BRIGHT LIGHT, which can be seen, on a clear night, 8 or 10 miles off.

Gull Island Shoal.

Mid-way between Cobourg and Port Hope, Gull Island Shoal exists. It is two miles in length and one mile from the shore, and is often bare. To guide the mariner against running on this dangerous ground, a lighthouse is built upon it, 45 feet high, showing a FIXED BRIGHT LIGHT, and on a clear night can be seen from 16 to 20 miles.

Courses and Distances.**FROM OSWEGO:**

To Gull Light (between Cobourg and Port Hope,) N-W by W N W.
Distance 21 miles.

Courses and Distances.

(continued.)

FROM COBOURG:

To French's Lake, E. & N. Distance 24 miles.

Courses and distances are taken from Capt. Ford's chart.

GRAFTON.

Grafton is situated about 8 miles East of Cobourg, and is of little importance in the shipping business. A wharf runs out from the shore into the lake, and has about ten feet of water. The light for this place is a small bright light on the storehouse, and not regularly lighted.

COLBORNE.

Nine miles below Grafton is Colborne. This place is chiefly used by small trading vessels, it having only one pier. Colborne and Grafton affords no shelter for vessels, both being exposed to the heavy seas of the lake.

Danger-Ogden's Point.

One mile West of Colborne is Ogden's Point, off which there are some boulders, and vessels coming to Colborne from the Westward, should give this place a good wide berth.

PRESQU' ISLE HARBOR.

This magnificent roadstead is considered one of the best harbors on the Canadian side of Lake Ontario, and when once entered, sailing craft are protected from any wind or sea. Twenty-four miles East & North of Cobourg, is the bluff point of Presqu' Isle, which is heavily wooded, and five miles N-E by E of this point brings abreast of the

Lighthouse.

Which is 67 feet high, showing a good BRIGHT STATIONARY LIGHT, and can be seen at a distance of 18 miles on a clear night.

Danger.

Beginning at the lighthouse, and running Southward, the water is shoally, with boulders

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Channel.

To make this harbor in the day time, steer to within half or three-quarters of a mile N-E. by E. off the lighthouse, or till the two lower lighthouses comes in range; thence N. by E. for the RED SPAR BUOY, which is placed on the end of the bar or middle ground (on which there is only 5 ft. of water,) continuing this course for a mile and a quarter, or until the two inner lighthouses come in range then change the course to S-W., directly for the Easternmost of the range lighthouses, and anchoring between them.

Another Red Spar Buoy

Is placed in about the center of the MIDDLE GROUND, and a vessel of light draft can cross between the lighthouse and the buoy, the depth of water being about seven feet. Vessels should never undertake to pass over the Middle Ground between the buoys, as they would certainly fetch up, all standing, the depth of water being only from 3½ to 4 ft.

Harbor Lights.

To make this harbor at night, steer N-E. by E. as before, thence N. by E. until the Range Lights are brought into line, and when in that position change the course to S-W., keeping on in that direction till midway between the two Range Lights, when the vessel can be brought up.

Danger.

The water shoals off ELM TREE POINT, for about one mile, has only 5 feet of water on it.

Four Acre Shoal.

This shoal is W N-W of the Second Range Light, extending to within half-a-mile from the shore, which makes it very dangerous at night to stretch too far into the bay beyond the Second Range Light. Four miles S-E by E off the main lighthouse, there is another dangerous shoal in the lake, with only 3 to 4½ feet of water on it, and is to the Eastward of the course steered from the lighthouse to the Scotch Bonnet. Two miles S-E of the last mentioned shoal there is another, but somewhat smaller.

Scotch Bonnet Light.

This excellent lighthouse is situated on Egg Island, or Scotch Bonnet, is one mile S S-W of Nicholas Island, and displays a BRIGHT FIXED LIGHT, bearing S-E of Presqu'Isle, and can be seen 13 miles.

The course from Presqu' Isle to Genesee River, is South, distance 55 miles.

KINGSTON HARBOR.

The above harbor is situated at the head of the river navigation of the St. Lawrence, in a bay formed by the headland dividing that river from the Cataraqui, and in the North-Easternmost angle of Lake Ontario, possessing one of the best inland harbors in North America. The approaches to the anchorage ground admit the entrance in any weather of vessels of much greater draught than any navigating Lake Ontario. Kingston Bay may be divided into two parts, distinctly marked—an outer and inner bay. The latter is formed by the mouth

of the Cataraqui River, and is sheltered on the North and East by the high tableland extending from the city along the North bank of the Cataraqui to the last canal lock at Kingston Mills; on the South it is sheltered by the bold point crowned by Fort Henry, which divides it from the St. Lawrence. On the North and South sides of this point are two small bays, the Northerly Bay, known as Haldimand Cove, having deep water only at its entrance. This cove or bay is separated from Kingston Harbor by a low point, called Point Frederick, at the extremity of which are earthworks encircling a martello tower. There is shoal water on this point, extending towards the inner bay or harbor proper, but the channel between it and the shoal at the tower, directly opposite the city buildings, is deep enough for any lake-going vessel, and is marked by two buoys on either side. The Westerly extremity of the inner bay is put down on old maps as Missisquoi Point, now the Marine Railway Ship Yard.

The outer bay may be traced by a line extending from Four Mile Point, opposite the lighthouse, to the head of Garden Island, thence across to the ship yard, and along the Westerly extension of the city to the mouth of the Bay of Quinte. The anchorage ground in the outer bay extends from opposite the ship yard to a point opposite Morton's distillery, about 300 yards from the shore throughout. Under the lee of Four Mile Point is a favorite shelter for lake-bound vessels during South-Westerly winds.

The inner bay, to an observer, presents evidence of injury done to its navigable facilities by the military works in and around Kingston. Below the Cataraqui Bridge extends an anchorage ground, estimated at 250 acres, now wholly useless from the intervention of the bridge. The Rocky Shoal opposite the market buildings might have been removed, and the objectionable nucleus for the deposit formed at the meeting of the waters of the Cataraqui River

and Lake Ontario would thus have been wanting. A canal, or cut, extending from the termination of Haldimand Cove to McRossie's mill at Green Bay could be easily made, and would afford any extent of berths for vessels, as well as an additional entrance to the harbor. A cut through the rock on the East side of the earthworks at Point Frederick, would also give additional berths.

In fact, the capacities of the harbor could be enlarged to an almost indefinite extent. At present, great as they are, the harbor is straggling. If the cut from Haldimand Cove to Green Bay were made, stone to an unlimited extent, for ballast, could be run into the hold of a vessel from the hills above. If the bridge and shoal tower were removed, vessels could be placed alongside the Grand Trunk Railway track at various points, for receiving or discharging cargo. The lake commerce consists :

FOREIGN.

1. The transhipment of grain brought from the Western States into barges for carriage to Montreal or Quebec.

1. The transshipment from barges of salt, pig iron and railroad iron, to vessels bound for the Western States.

2. The transit of goods between points in Ontario and New York State, by way of the Cape Vincent ferry steamer, plying from Kingston in connection with the Rome and Watertown Railway.

3. The export of lumber from Newboro' Westport and Brewer's Mills, on the Rideau Canal to Kingston, for shipment thence to Oswego. Return cargoes: coal, plaster and water lime.

4. The export of iron ores from Crosby and Bedford mines for shipment to Cleveland and Charlotte. Return cargoes of coal.

5. The export of grain, chiefly barley, purchased in Kingston market, for shipment to Oswego.

7. Miscellaneous: Horses, dairy cattle, sheep, long wool, butter, eggs, poultry and fish.

HOME.

Flour, brought by Grand Trunk Railroad and Lake craft, for home consumption. Cheese from local dairies for shipment to Montreal. Fuel, wood and lumber, in scows from the Rideau Canal.

There are extensive local concerns largely engaged in the wholesale trade, chiefly the house of J. Carruthers & Co., whose operations are fully as large as those of any house in Canada in the same trade. The Canadian Engine and Machine Works, on Ontario St. manufacture railway locomotives and cars.

A large piano factory (that of Weber & Co.) turns out one piano daily. The foundries of Chown & Cunningham, chiefly engaged in the stove manufacture, and that of Davidson & Doran, in the business of making marine engines and boilers, and Brokenshire's Atlantic Pumps, give employment to large numbers of workmen. The ship yard of Mr. John Power has every facility for hauling out, repairing, or building vessels.

The general business of the city has suffered from a variety of causes, chief of which were the failure of two large banking concerns, but, it is hoped a bright day is coming. The Kingston and Pembroke Railway, when constructed, will be the only bidder for a trade equal to the manufacture of two hundred million feet of sawed lumber yearly. Running for 140 miles through a new country, all the vast trade flowing from the developments of new agricultural and manufacturing settlements will fall to the city. Pembroke is nearly due North of Kingston, and the character of the interven-

ing country such that no rival line need be feared. Rich deposits of iron, mica, galena, and phosphate of lime are known to exist within easy distance of the proposed route. Some of the townships to be traversed contain large tracts of good land. The water powers on the streams to be crossed are numerous. The land is cheap—the Government gives it away.

Kingston has some sights and scenes worth the visit of the passing traveller. The Penitentiary, Rockwood Lunatic Asylum, and the Fort, will all repay a visit. The view from the fort is one of the finest in the lake region of North America. A trip down the canal to Ottawa, though slow, is pleasant when made by steamer. The scenery is unique and picturesque, particularly that on Rideau Lake. The Bay of Quinte has also some of the prettiest pictures to offer that can greet the eye of the tourist.

There are three channels by which it may be made.

Batteau Channel.

The Batteau Channel is between Wolfe or Long Island, and Simcoe or Gage Island : this course is chiefly used by small craft, having in several places little more than two fathoms of water.

The South Channel is between Simcoe or Gage Island and Snake Island. In this channel there are five fathoms of water.

The North Channel, which is the best, runs between Snake Island and the Main Land; and although it increases the distance little, is by far the safest, averaging seven fathoms of water.

South Channel.

When making Kingston Harbor from the Western ports, steer for the Mid-Channel between the Real and the False Ducks ; then alter the course to N-E. by N. $\frac{1}{2}$ N., which takes the vessel through the South Channel direct to Kingston Harbor.

When the wind is ahead, make this course the base line, never passing it to the Southward, but stand off and on to the

Northward and Eastward until inside Nine Mile Point on Simcoe Island ; keep close to Four Mile Point, (on Simcoe Island,) leaving Snake Island (which has a lighthouse 45 ft. high, showing a RED light, which can be seen at a distance of 8 miles,) bearing N. W. or to the left ; from thence the course is clear to Kingston. When running along Simcoe Island from Nine Mile Point Lighthouse (this lighthouse is 45 feet high, and light stationary—BRIGHT,) do not follow the curve of the Island, as the water is very shoal.

North Channel.

If the North Channel should be taken, when inside Nine Mile Point lighthouse, steer due North till mid-way between Snake Island and the Main Land, which course clears a shoal bearing N-W. of the Lighthouse, giving Snake Island a good half mile berth to the eastward, thence due east into the harbor.

Pigeon Island Light.

A lighthouse was erected in the Fall of 1870, on Pigeon Island, and is directly in

the way from Oswego to Kingston, and is 4 miles from the head of Wolfe Island. The light is a REVOLVING WHITE LIGHT, with an interval of one minute and ten seconds between flashes. It is elevated 46 feet above high water, and in clear weather can be seen at a distance of 12 miles. It is visible from all points of the compass, and was first exhibited Nov. 1st, 1870.

Leaving Oswego for Kingston, two courses may be taken. 1st. Due North will take you to Nine Mile Point, clearing the Ducks, leaving them to the Westward, and Pigeon Island and Charity Shoal to the Eastward.

2nd. North $\frac{1}{2}$ West (the best course) will take to mid-channel between the True and False Ducks.

False Duck Light.

The BRIGHT STATIONARY LIGHT at the False Duck will be seen first at night; but, in the day time the high bushy land of South Bay Point will be seen before the Ducks.

South Bay Point—Anchorage.

If a gale be threatening from the W. or S-W., good anchorage and shelter can be had under the lee of South Bay Point. The anchorage is between the end of the Point and the shoal. The channel between South Bay Point and False Duck should not be attempted except with a leading wind and fine weather, and a good pilot, a dangerous shoal existing between the Real Duck Island and South Bay Point.

Upper Gap.

Kingston may be made through the Upper Gap, which is between Indian Point on the West, and Amherst Island on the East. Steer N. by E. till between Amherst Island and the Main Land, then N-E. by E. till North of the Brothers, thence E. & N. to Kingston.

Upper Gap Light.

To facilitate the safety of vessels navigating here, the Dominion Government has erected a lighthouse on the North-east point of Indian Point, which can be seen at a dis-

tance of about 10 miles, and has proved of the greatest benefit to mariners seafaring in this direction.

Main Duck-Anchorage.

To the N-E or the inside of the Main Duck Island, good anchorage and shelter can be obtained from Southerly gales.

WELLINGTON.

The small port of Wellington is situated 12 miles East by North $\frac{1}{2}$ North of the Scotch Bonnet, and 8 miles N. N-W. of Salmon Point, on the Prince Edward shore. There are two small docks with about ten feet of water. Wellington is the most exposed of any port on the lake. It is noted for its many dangerous points, and very seldom a season passes without some vessel getting "hurt," or driven ashore, leaving her bones to bleach as a memento of her visit. No light. In making this place off Long Point, get the light to bear West, thence N. $\frac{1}{2}$ E. to Wellington.

SACKETT'S HARBOR.

This harbor is considered one of the best natural harbors on the American side of Lake Ontario. Its situation, as well as depth of water, affords ample protection for the largest class of vessels that navigate the lakes, and vessels when once inside of Sackett's Harbor, the heavy winds and seas of the lake cannot injure them. It is on the South shore of Black River Bay, an arm of the lake running several miles inland, and having Point Peninsula bearing W. by N., distance 10 miles; Great Stoney Island, W by S $\frac{1}{2}$ S, distance 10 miles; and Great Galloo Island bearing W. by S., 16 miles.

To make this harbor from the Westward, steer for the mid-channel between the Real Ducks and the Galloo Island, until the Galloo Light bears South, thence E to Horse Island, or Sackett's Light, distance 17 miles.

From Oswego, N. $\frac{1}{2}$ E. for Galloo Light, and when well to the North of the Island,

thence E to Horse Island, or Sackets Light, distance 17 miles.

From Kingston, after passing Nine Mile Point on Simcoe Island, two courses may be taken: 1st—S by W for about ten miles, until South of Charity Shoal, thence E S-E fifteen miles, till abreast Point Peninsula, thence E into the harbor. 2nd—If the wind be favorable, after passing Nine Mile Point, steer S-E 23 miles, till off Point Peninsula, thence E as before. This course will leave Pigeon Island and Charity Shoal well to the Westward.

Danger.

Off the S-W head of Stoney Island a shoal runs out into the lake, about 1 mile, and it should be given a good mile berth.

In passing from Stoney Point to Horse Island Light, a shoal exists about 1 mile W by N from the Little Ducklings, and ranges with the anchorage off Six Town Point and Pillar Point. **NOTE**—The last mentioned shoal is not marked on the chart.

Lighthouse.

Sackets Harbor Lighthouse is erected on Horse Island, at the South-western point of Black River Bay, one and a-half miles West of the harbor, showing a **FIXED LIGHT**, visible, in fine weather, 11 miles.

Great Galloo Island Light.

This lighthouse is built on the S-W end of Great Galloo Island, and is 55 feet high, displaying a **BRIGHT LIGHT**, and bearing W by S $\frac{1}{8}$ of Horse Island Light. It can be seen a distance of 14 miles.

Stoney Point Light.

Stoney Point **REVOLVING LIGHT** is seen from all points of the compass when on the lake, and is situated opposite Stoney Island. It is the beacon of the Stoney Island passage to Sackets Harbor, and can be seen in fine weather from 10 to 12 miles.

Courses and Distances.

From Oswego to Sackets Harbor, through Stoney Point Passage, N N-E. Distance 20 miles.

From Stoney Point Light to Horse Island Light, N-E $\frac{1}{4}$ E. Distance 11 miles.

From Stoney Point Light to the anchorage abreast of Point Peninsula, N-E by N $\frac{1}{4}$ N. Distance 10 miles.

Courses and Distances.

(CONTINUED.)

From mid-channel between the Little Galloo and Stony Island, to the foot of Big Galloo, N-E by W. Distance 5 miles.

From the foot of the Big Galloo, to abreast of Tibbett's Light, N by W. Distance 14 miles.

From Galloo Shoal to Tibbett's Light, N-E by N $\frac{1}{2}$ N. Distance 19 miles.

From Tibbett's Light to the anchorage abreast Cape Vincent, N-E. Distance 4 miles.

From Point Peninsula to Simcoe Light, N-W by E. Distance 11 miles.

From Galloo Island Light to Horse Island Light, E by N. Distance 16 miles.

From the anchorage on Real Ducks to Horse Island Light, E. Distance 14 miles.

From Point Peninsula to Upper Gap, (Bay of Quinte,) N-W by W $\frac{1}{2}$ W. Distance 30 miles.

From anchorage off Real Ducks to Tibbett's Light, N-E $\frac{1}{2}$ E. Distance 19 miles.

From anchorage off Real Ducks to Simcoe Light, N by E. Distance 19 miles.

Charity Shoal.

From Pigeon Island Light, to the West end of Charity Shoal, S $\frac{1}{2}$ W. Distance 3 miles.

From Pigeon Island Light, to the Eastern end of Charity Shoal, S-E by E. Distance 3 miles.

From anchorage under Real Ducks to Charity Shoal, N-E by N $\frac{1}{2}$ N. Distance 13 miles.

From Tibbett's Light to the foot of Charity Shoal, W S-W. Distance 7 miles.

From the head of Grenadier Island to Charity Shoal, W $\frac{1}{2}$ N. Distance 6 miles.

From mid-channel, between Real and False Ducks, to Charity Shoal, N-E $\frac{1}{2}$ E. Distance 13 miles.

Courses and distances are taken from Capt. Ford's chart.

HENDERSON.

Henderson Harbor is formed by Six Town Point, and is 8 miles to the Westward of Sackets Harbor. It is a large, open Bay, and contains good anchorage. When going into Henderson, beware of the shoal which lies to the Westward of the little Duck Island, giving Six Town Point an easy berth. No light.

CHAUMONT BAY.

This bay is situated at the foot of Lake Ontario, and formed by Point Peninsula on the West, Pillar Point on the East, Three Mile Bay on the North, and Chaumont on the North and East, which makes it a capital harbor for shelter. Good anchorage can be had in any part of the bay, with from 5 to 8 fathoms of water.

Anchorage can also be had opposite Point Peninsula, about 2½ miles from the outer end of the Point, opposite Wilcox village.

The course into the above bay is between Stoney Island and Stoney Point, N-E by N.

There is no light exhibited at Chaumont Bay.

PORT ONTARIO.

The above port is situated about 19 miles N-E by E. of Oswego. The piers at Port Ontario have all been washed away, and the channel is crooked, and the entrance bad in rough weather.

There is no light exhibited at the above port, it having been discontinued some years ago.

Courses and Distances.

FROM OSWEGO:

To abreast Nine Mile Point, N-E, distance 9 miles; from thence to Port Ontario, E by N $\frac{1}{2}$ N, distance 10 miles.

FROM ONTARIO:

To Stoney Point Light, N by W $\frac{1}{2}$ W. Distance 18 miles.

Courses and distances are taken from Capt. Ford's chart.

PORT OF TORONTO.

This spacious anchorage is without doubt the best natural harbor on Lake Ontario.— It is nearly circular, being formed by the main land on the north, and by a long, low, and narrow spit of sand, on the east, south, and south-west, called the Peninsular or Island; it extends in a south-westerly direction from the highlands in the township of Scarboro', and terminates in a point which suddenly turns to the north opposite the Old Garrison, thus is enclosed a beautiful basin, of about two and a half miles in diameter, capable of containing a great number of vessels.

In running up the Lake from the eastward at night, give the shore a good two-mile berth when abreast of the Scarboro' heights, otherwise the light on Gibraltar Point will be imperceptible.

Vessels running for shelter from an easterly gale should anchor on the W. side of the Island about one mile from shore, where

there is good holding ground in six or seven fathoms water, mud and clay bottom.

Shoal.

A sandy shoal stretches into the Lake for three-quarters of a mile in a S-W direction off Gibraltar Point, and is thence continued along the W. side of the Island extending N. to the Bar Buoys which mark the channel into the bay, at an average distance of a quarter of a mile from the Island.

Gibraltar Point Lighthouse.

The south-west extremity of this island is called Gibraltar Point, on which is erected the Lighthouse, 66 feet high, having a **FIXED BRIGHT LIGHT.**

The West Channel.

Off Gibraltar Point Lighthouse there is a black bell buoy, the lighthouse bears from it N. $\frac{1}{2}$ E. The second is a black bell buoy with a white ball on the end ; the lighthouse bears from it N-E ; it bears from the first buoy W. by N. $\frac{1}{2}$ N.

N-W. by W. from the last mentioned buoy, on the N-W. point of the bank, is a

spar buoy, painted black, standing nine feet out of the water ; Gibraltar Point Light-house bearing N-E. by E., and the high chimney of the Lunatic Asylum Water Works N. by W. $\frac{1}{2}$ W. Coming in from the spar buoy on that course gives three fathoms of water, until pretty well up to the shore, when the two lights are in range there is 12 feet of water, which depth continues in mid-channel till past the red buoy, when the water deepens as you get in.

The red buoy, at the entrance of the West channel, stands in 11 $\frac{1}{2}$ feet of water.

The East Channel.

In the East channel there are two red spar buoys on the East (starboard) side going into the Bay, and two black spar buoys on the West (port) side going in. There is only 6 $\frac{1}{2}$ feet of water in mid-channel, in the shallowest part. If any of the buoys should be displaced, the marks for the channel are the Storehouse on Tinning's Wharf and the Offices of the Grand Trunk Railroad, foot of Simcoe Street.

Harbor Lights.

On the Queen's Wharf are placed the Harbor Lights—the northernmost a fixed RED light, the other a BRIGHT BEACON LIGHT on the western extremity of the pier.

Courses and Distances.

FROM OSWEGO:

To Gibraltar Point Light, W N W. Distance 120 miles.

FROM TORONTO:

To Stoney Point Light, E N E. Distance 120 miles.

" " " Galloo Light, E N E. Distance 120 miles.

" " " Presqu' Isle, E by N N E. Distance 90 miles.

" " " Long Point, E N E. Distance 100 miles.

" " " Niagara, S by E N E. " 81 "

" " " Oak Orchard, S S-E. Distance 60 "

" " " Port Hope, E N-E. " 55 "

Courses and distances are taken from Capt. Ford's chart.

Water Level.

Table showing the extremes of water level of Lake Ontario, observed at Oswego, N.Y., for the years specified:

DATE.	HIGHEST.		LOWEST.	
	feet	inches	feet	inches
1837	4	0	0	0
1838	4	0	0	0
1841	3	4	0	4
1845	1	5	0	0
1846	1	7	0	0
1849	2	0	0	0
1850	2	0	0	0
1851	2	0	0	0
1857	3	10	0	10
1860	4	5	0	5
1865	0	0	0	0
1870	5	5	0	0

placed the
most a fixed
ACON LIGHT
pier.

was.

F N N. Distance

N. Distance 150

Distance 150 miles.

N. Distance 55

Distance 100 miles.

" 31 "

Distance 55 "

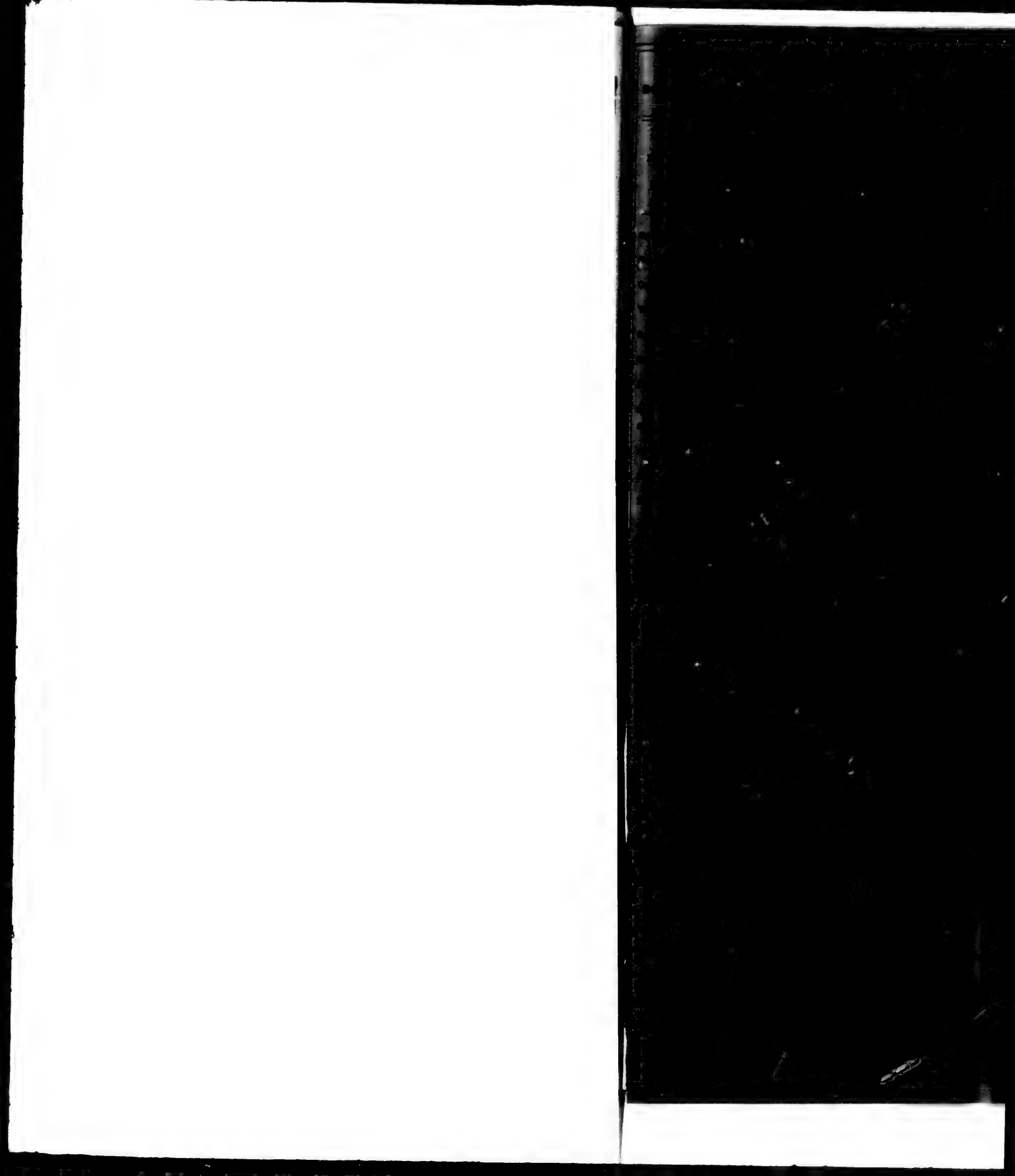
" 52 "

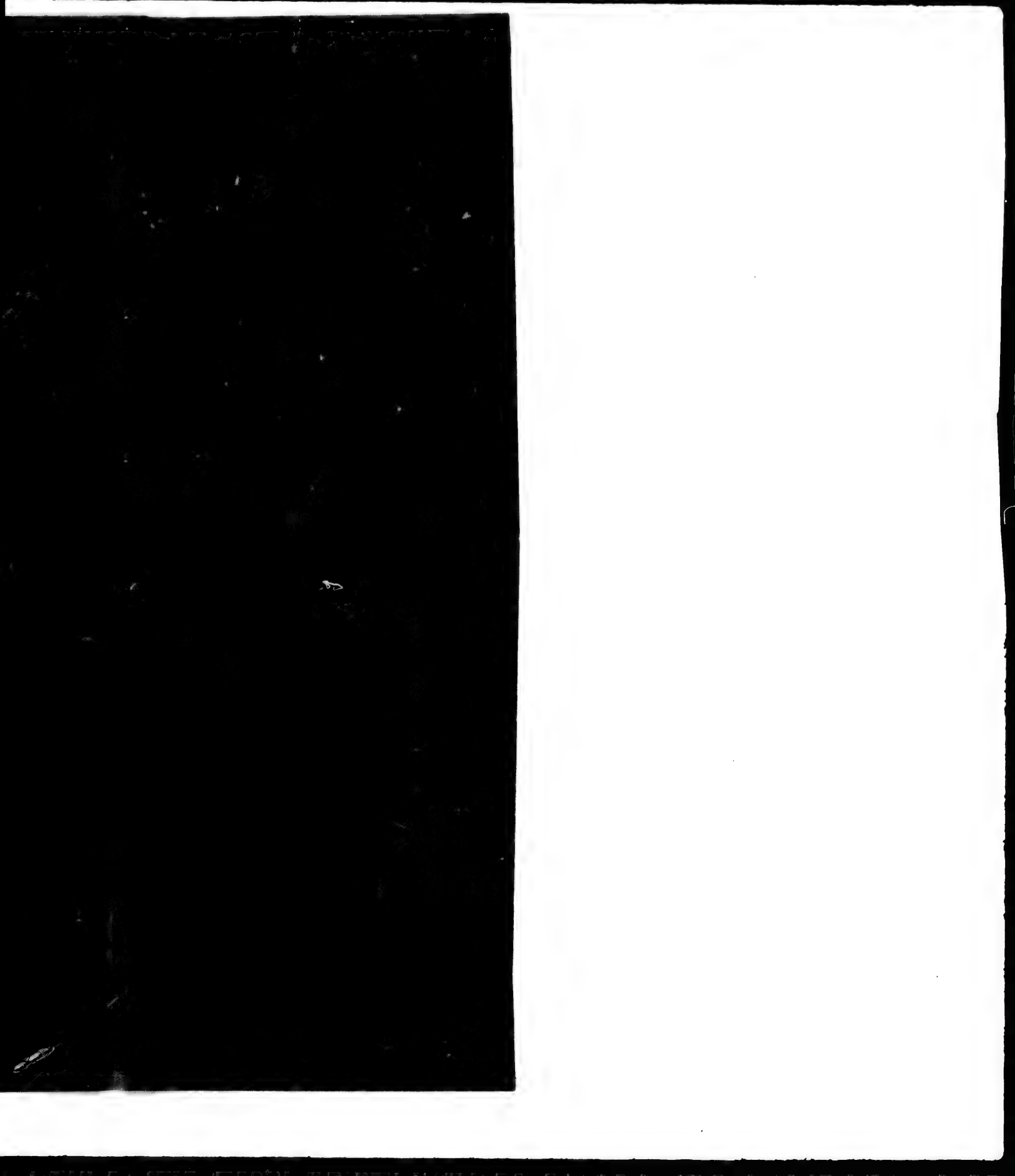
Ford's chart.

of Lake Ontario,
ed:

LOWEST.

Foot	Inches
0	7
1	7
2	4
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0





BAY OF QUINTE.

TELEGRAPH ISLAND.

A lighthouse has been built on Telegraph Island. It is a **FIXED WHITE LIGHT**, 46 feet above water level, visible 12 miles away, and can be seen approaching from East and West. Apparatus—catoptric, two lamps (reflectors). Tower—wood, painted white.

The above light is visible from sunset to sunrise, during the navigation season.

BELLEVILLE.

Belleville is situated in the township of Thurlow, at the mouth of the river Moira, and on the shores of the Bay of Quinte. It covers an area of 1,200 acres, and for beauty of situation cannot be surpassed. The lum-

her trade has long been a source of prosperity to Belleville; for some years past, the number of saw logs brought down the Moira have averaged from 150,000 to 200,000 a year. The greater part are manufactured at the different mills, some of which are the largest, West of the Ottawa. The two largest are those of Messrs. Flint & Yeomans, which is situated at the foot of Water Street, and that of Messrs. H. B. Rathbun & Son, on the island at the mouth of the river. The capacity of both is about equal. In each there are from 90 to 100 saws, chiefly in gangs, capable of manufacturing from 75,000 to 100,000 feet of lumber every 24 hours.

Another mill on the South line of the bay, is owned by Messrs. Page & Co. It was erected in 1864, and its capacity has since been largely increased. It manufactures about 50,000 feet per day.

East Channel.

The channel leading into Belleville harbor is defined by buoys painted red, on the

East side, and buoys painted WHITE, on the West side. The depth of water in the channel is about 10 feet, except at the two outer buoys, which only give 9 feet. In many parts of the channel there is from 12 to 15 feet of water. The bottom is composed of sawdust. There is 12 feet of water at the lighthouse pier going in, and 10 feet along the docks to the Plaster Mill, 8 feet at the Ferry Landing, and 7 feet above the Ferry Landing towards the bridge.

The depth of water at the outer end of Mill Island (Rathbun's) is 9 feet, and 5 feet at the dock at the mill. The width of the harbor from Rathbun's Mill to the dock opposite, is 196 feet.

Flint's Channel.

There is 13 feet of water at the entrance of the above channel, to about mid-way through, when the water decreases to 10 feet, from mid-channel to Flint's Wharf.

There is 8 feet of water at Flint's lumber dock, and 9 feet from that point along the boom that connects with the above dock.

Lighthouse.

The Belleville lighthouse is erected on the outer dock, on the East side of the harbor, and is constructed of wood, with a tin dome. The height is 30 feet above the level of the water, and shows a WHITE STATIONARY LIGHT, which can be seen a distance of 9 to 12 miles in fine weather.

Harbor Dues.

	cts.
Steamers over 75 tons, each time of calling	50
Schooners and bergers under 75 tons, each time of calling	25
Schooners and barges from 75 and 100 tons, each time of calling	50
Schooners and barges over 100 tons, each time of calling	75

ected on the
the harbor,
a tin dome.
the level of
STATIONARY
distance of 9

time of
..... 30
75 tons,
..... 25
and 100
..... 50
00 tons,
..... 75

UNITED STATES MARINE LAWS.

Regulations for Preventing Collisions on the Water.

PRELIMINARY.

Article 1.—In the following rules every steamship which is under sail, and not under steam, is to be considered a sailing ship; and every steamship which is under steam, whether under sail or not, is to be considered a ship under steam.

LIGHTS.

Article 2.—The lights mentioned in the following articles, and no others, shall be carried in all weathers between sunset and sunrise.

LIGHTS FOR STEAMSHIPS.

Article 3.—All steam vessels when under way shall carry—At the foremast head, a bright white light, so fixed as to show an uniform and unbroken light over an arc of the horizon of twenty points of the compass, so fixed as to throw the light ten points on each side of the ship, viz: from right ahead to two points abaft the beam on either side, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

On the starboard side, a green light, so constructed as to throw an uniform and unbroken light over an arc of the horizon of ten points of the compass, so fixed as to throw the light from right

aboard to two points abaft the beam on the starboard side, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

On the port side, a red light, so constructed as to show an uniform unbroken light over an arc of the horizon of ten points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the port side, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

The said green and red side lights shall be fitted with inboard screens, projecting at least three feet forward from the light, so as to prevent these lights from being seen across the bow.

LIGHTS FOR STEAM TUGS.

Article 4.—Steamships, when towing other ships, shall carry two bright white masthead lights vertically, in addition to their side lights, so as to distinguish them from other steamships. Each of these masthead lights shall be of the same construction and character as the masthead lights which other steamships are required to carry.

LIGHTS FOR SAILING-SHIPS.

Article 5.—Sailing-ships under way or being towed, shall carry the same lights as steamships under way, with the exception of the white masthead lights, which they shall never carry.

EXCEPTIONAL LIGHTS FOR SMALL SAILING-VESSELS.

Article 6.—Whenever, as in the case of small vessels during bad weather, the green and red lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessel, ready for instant exhibition, and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, they shall each be painted outside with the color of the light they respectively contain, and shall be provided with suitable screens.

LIGHTS FOR SHIPS AT ANCHOR.

Article 7.—Ships, whether steamships or sailing ships, when at anchor in roadsteads or fairways, shall, between sunset and sunrise, exhibit where it can best be seen, but at a height not exceeding twenty feet above the hull, a white light in a globular lantern of eight inches in diameter, and so constructed as to show a clear uniform and unbroken light visible all around the horizon, and at a distance of at least one mile.

LIGHTS FOR FISHING VESSELS AND BOATS.

Article 8.—Open fishing boats and other open boats shall not be required to carry side lights required for other vessels, but shall, if they do not carry such lights, carry a lantern having a green slide on the one side and a red slide on the other side, and on the approach of or to other vessels, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side. Fishing vessels and open boats when at anchor, or attached to their nets and stationary, shall exhibit a bright white light. Fishing vessels and open boats shall, however, not be prevented from using a flare-up in addition, if considered expedient.

FOG SIGNALS.

Article 10.—Whenever there is a fog, whether by day or night, the fog signals described below shall be carried and used, and shall be sounded at least every five minutes, viz:—Steamships under way shall use a steam whistle placed before the funnel, not less than eight feet from the deck.

Sailing ships under way shall use a fog horn.

Steamships and sailing ships when not under way shall use a bell.

Steering and Sailing Rules.

TWO SAILING SHIPS MEETING.

Article 11.—If two sailing ships are meeting end on, or nearly end on, so as to involve risk of collision, the helms of both shall be put to port, so that each may pass on the port side of the other.

TWO SAILING SHIPS CROSSING.

Article 12.—When two sailing ships are crossing so as to involve risk of collision, then, if they have the wind on different sides, the ship with the wind on the port side shall keep out of the way of the ship with the wind on the starboard side, except in the case in which the ship with the wind on the port side is close hauled, and the other ship free, in which case the latter ship shall keep out of the way. But if they have the wind on the same side, or if one of them has the wind aft, the ship which is to windward shall keep out of the way of the ship which is to leeward.

TWO SHIPS UNDER STEAM MEETING.

Article 13.—If two ships under steam are meeting end on, or nearly end on, so as to involve risk of collision, the helms of both shall be put to port, so that each may pass on the port side of the other.

TWO SHIPS UNDER STEAM CROSSING.

Article 14.—If two ships under steam are crossing so as to involve risk of collision, the ship which has the other on her own starboard side shall keep out of the way of the other.

SAILING SHIP AND SHIP UNDER STEAM.

Article 15.—If two ships, one of which is a sailing ship and the other a steamship, are proceeding in such directions as to involve risk of collision, the steamship shall keep out of the way of the sailing ship.

SHIPS UNDER STEAM TO SLACKEN SPEED.

Article 16.—Every steamship, when approaching another ship, so as to involve risk of collision, shall slacken her speed, or, if necessary, stop and reverse; and every steamship shall, when in a fog, go at a moderate speed.

VESSELS OVERTAKING OTHER VESSELS.

Article 17.—Every vessel overtaking any other vessel shall keep out of way of the said last mentioned vessel.

CONSTRUCTION OF ARTICLES 12, 14, 15 AND 17.

Article 12.—Where, by the above rules, one of two ships is to keep out of the way, the other shall keep her course subject to the qualifications contained in the following article :—

PROVIDO TO SAVE SPECIAL CASES.

Article 13.—In obeying and construing these rules, due regard must be had to all dangers of navigation, and due regard must also be had to any special circumstances which may exist in any particular case, rendering a departure from the above rules necessary in order to avoid immediate danger.

NO SHIP UNDER ANY CIRCUMSTANCES TO NEGLECT PROPER PRECAUTIONS.

Article 20.—Nothing in these rules shall exonerate any ship, or the owner or master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper lookout, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

APPROVED, April 23, 1864.]

The following section, in addition to the above, was approved February 28, 1871 :—

And be it further enacted : " That it shall be the duty of all Collectors, or other chief officers of the Customs, to require all sailing vessels to be furnished with proper signal lights, as provided for by the Act of April 23, 1864, entitled, 'An Act fixing certain rules and regulations for preventing collisions on the water.' And every such vessel shall, on the approach of any steamer during the night time, show a lighted torch upon that point or quarter to which such steamer shall be approaching. And every such vessel that shall be navigated without complying with the terms of the said Act of April 23, 1864, and the provisions of this section, shall forfeit and pay the sum of Two Hundred Dollars, one half to go to the informer ; and for which sum the vessel so navigated shall be liable, and may be seized and proceeded against by way of libel, in any District Court of the United States having jurisdiction of the offence."

Smuggling.

The following law, which is given in full, is of importance to owners or masters of vessels navigating the lakes. It will be seen that all "stores" taken in excess of a vessel's needs are liable to duty, and in default of payment thereof, a penalty is inflicted to the amount of four times the value of such excess. Other provisions are made which should claim the attention of saloon-keepers on board of steamers, and it is for the protection of all concerned that the act is given in full:

AN ACT to amend section twenty-two of an act entitled "An act to prevent smuggling, and for other purposes," approved July eighteen, eighteen hundred and sixty-six.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, that section twenty-two of an act entitled "An act further to prevent smuggling, and for other purposes;" approved July eighteen, eighteen hundred and sixty-six, be, and the same is hereby, amended, so that the same shall be as follows:

SECTION 22. And be it further enacted, That if any vessel enrolled or licensed to engage in the foreign and coasting trade on the northern, north-eastern and north-western frontiers of the United States shall touch at any port or place in the adjacent British provinces, and the master or other person having charge of such vessel shall purchase any goods, wares or merchandise, for the use of said vessel, said master or other person having charge of said vessel shall report the same with cost and quantity thereof, to the collector or other officer of the customs at the first port in the United States at which he shall next arrive, designating them "see stores;" and in the oath to be taken by such master or other person in charge of such vessel, on making said report, he shall declare that the articles so specified or designated "see stores" are truly intended for the use exclusively of said vessel, and are not intended for sale, transfer or private use; and if, upon examination and inspection by the collector or other officer of the customs, such articles are not deemed excessive in quantity for the use of said vessel, (until an American port may

be reached by such vessel, where such sea stores can be obtained, such articles shall be declared free of duty; but if it shall be found that the quantity or quantities of such articles, or any part thereof so reported, are excessive, it shall be lawful for the collector or other officer of the customs to estimate the amount of duty on such excess, which shall be forthwith paid by said master or other person having charge of said vessel, on pain of forfeiting a sum of not less than one hundred dollars, nor more than four times the value of such excess, or such master or other person having charge of such vessel shall be liable to imprisonment for a term of not less than three months, nor more than three years, at the discretion of the Court. And if any other or greater quantity of dutiable articles shall be found on board such vessel than are specified in such report or entry of said articles, or any part thereof, shall be landed without a permit from a collector or other officer of the customs, such articles, together with the vessel, her apparel, tackle and furniture, shall be seized and forfeited. Provided always, that articles purchased for the use of or for sale on board any steamboat, propeller, or other vessel, as saloon stores or supplies, shall be deemed goods, wares, and merchandise, and shall be liable (when purchased at a foreign port) to entry, and the payment of the duties found to be due thereon at the first port of arrival of such vessel in the United States; and for a failure on the part of the saloon-keeper or person purchasing or owning such articles to report, make entries, and pay duties, as hereinbefore required, such articles, together with the fixtures and other goods, wares, or merchandise, found in such saloon, on or about such vessel belonging to and owned by such saloon-keeper, or other person interested in such saloon, shall be seized and forfeited, and such saloon-keeper, or other person purchasing and owning, as aforesaid, shall forfeit and pay the sum of not less than one hundred dollars, nor more than five hundred dollars, and in addition thereto shall be imprisoned for a term of not less than three months nor more than two years.

Sheath Knives.

An Act to prevent the wearing of Sheath Knives
by American Seamen.

Be it enacted, &c. That the existing regulation for the government of the navy of the United States, prohibiting the wearing of Sheath Knives on shipboard is hereby extended and made applicable to all seamen in the merchant service.

Sec. 2. That it shall be the duty of the master or other officer in command of any ship or vessel registered, enrolled, or licensed under the laws of the United States, and of the owner or other person entering into contract for the employment of a seaman or other subordinate upon any such ship or vessel, to inform every person offering to ship himself of the provisions of this law, and to require his compliance therewith, under a penalty of fifty dollars for each omission, to be sued for and recovered in the name of the United States of America, under the direction of the Secretary of the Treasury, one-half for the benefit of the informer, and the other half for the benefit of the fund for the relief of sick and disabled seamen,

July 27, 1868 :—

Reduction of U. S. Custom Fees.

The following schedule of fees, is "prescribed for collection, under the 7th section of the act of July 1, 1870, as amended by the third section of the joint resolution of February 10, 1871, at the ports on the northern and north-western frontiers of the United States :"

- 1 For the admeasurement of tonnage and certifying the same, for every transverse section under the tonnage deck. \$1.50
- 2 For each between decks above the tonnage deck 2.00
- 3 For each poop or closed-in space above the upper spar deck, required by law to be admeasured..... 1.50
- 4 For certificate of enrollment, including band and oath.. 1.10

1 For granting a license, including bond and oath, to a vessel not over twenty tons burden.....	.50
2 For granting a license to a vessel above 20 tons and not over 100 tons, including bond and oath.....	.70
3 For granting a license to a vessel over 100 tons, including bond and oath.....	1.30
4 For certifying a manifest, including master's oath, and granting a permit for a vessel under 50 tons to go from district to district.....	.35
5 For certifying a manifest, including master's oath, and granting a permit for a vessel over 50 tons to go from district to district.....	.50
6 For receiving a manifest, including oath of master, on arrival of a vessel under 50 tons from one collection district to another, whether touching at foreign intermediate points or not.....	.35
7 For receiving a manifest, including master's oath, on arrival of a vessel of over 50 tons, from one collection district to another, whether touching at foreign intermediate ports or not.....	.50
8 For certifying a manifest, including oath of master, and granting a permit to a vessel under 50 tons, laden with a cargo destined for a port or place in another district at which there is no Custom House.....	.35
9 For certifying a manifest, including master's oath, and granting a permit to a vessel above 50 tons, laden with a cargo destined for a port or place in another district, at which there is no Custom House.....	.50
10 For the entry of a vessel direct from a foreign port....	.50
11 For the clearance of a vessel direct to a foreign port....	.75
12 For post entry.....	2.00
13 For a permit to land or deliver imported goods....	.35
14 For a bond officially taken, not otherwise provided for.....	.50
15 For a permit to land goods for exportation entitled to drawbacks.....	.35
16 For debenture or other official certificates not otherwise provided for.....	.90

Knives

for the governing the vessel and made

other officer in, or licensed master or other of a seaman or inform every this law, and by of fifty dollars in the name of the Secretary of the Treasury, the informant, a relief of sick

Fees.

for collection, demanded by January 10, 1871, contents of the

ing the same, the dock. \$1.50 dock 3.00 upper spar 1.50 and oath.. 1.10

21 For recording bills of sale, mortgages, hypothecations, or conveyances of vessels.....	30
22 For recording all certificates for discharging and cancelling any such conveyance.....	30
23 For furnishing a certificate setting forth the names of the owners of any registered or enrolled vessels, the parts or portions owned by each, and also the material facts of any existing bill of sale, mortgage, hypothecation or other incumbrance; the date, amount of such incumbrance, and from and to whom made.....	1.00
24 For furnishing copies of such records each bill of sale, mortgage, or other conveyance.....	.50
25 For receiving a manifest of each railroad car, or other vehicle, laden with goods, wares or merchandise imported from foreign contiguous territory.....	.25
26 For an official certificate to each manifest of cars laden with domestic merchandise, in transit through Canada.....	.25
27 For entry of goods, wares and merchandise for consumption, warehouse or rewarehouse, transportation or exportation, including oath, and permit to land or deliver the same.....	.50
28 For certificate of registry, including bond and oath.....	2.25
29 For indorsement of change of master on registry.....	1.00

Enrolled and licensed vessels departing from or arriving at a port in one collection district, to or from a port in another collection district, although touching at intermediate foreign ports, are exempted from the payment of the entrance or clearance fees prescribed by the fourteenth and fifteenth paragraphs of this circular, and from the payment of tonnage tax; but, in all cases, an entrance fee and clearance must be made, and fees be paid as prescribed by paragraphs 8, 9, 10 and 11.

Ferry boats, however, running on routes duly bonded and used exclusively for carrying sealed cars, under the provisions of sections 5 and 6 of the Act of July 16, 1876, and the regulations of this department, and ferry boats carrying passengers and their personal baggage only, are not required to enter or clear, or to pay entrance or clearance fees. But the personal baggage is

carried is subject to the provisions of section 46 of the act of March 3, 1793, and acts supplementary thereto.

No fees other than those mentioned herein will be received in cases in which the vessel concerned navigates the waters of the Northern, North-eastern and North-western frontiers otherwise than by sea.

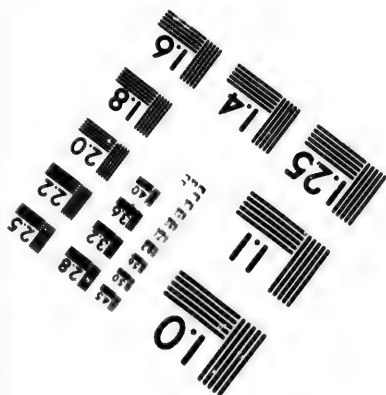
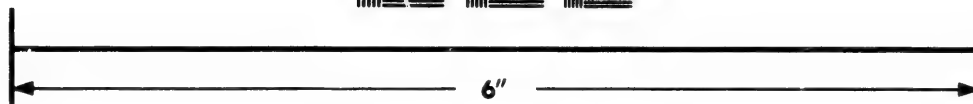
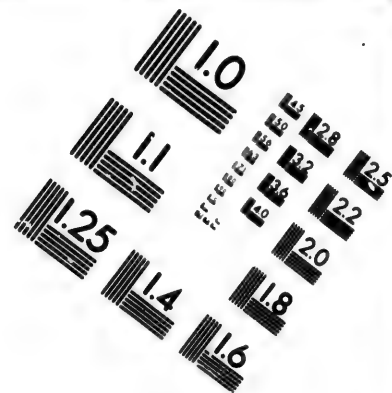
CANADIAN CANAL REGULATIONS.

The following is a summary of the Regulations for the management and protection of the Provincial Canals, together with the fines and penalties imposed for the non-observance of the same :—

The master or person in charge of any vessel or steamboat, navigating any of the Provincial Canals, shall, immediately upon or before entering any of these canals, obtain a clearance for such vessels, as aforesaid, at the first or nearest collector's office, which clearance shall be exhibited at the first lock after departing from the collector's office, and the same shall be exhibited at any other lock when required by any officer, and in default the lockmaster shall not permit such vessel to pass through the lock, and the owner or master in charge thereof, shall be subject to a fine not exceeding ten pounds currency; and any officer duly appointed, shall have the right at any time to board any vessel, when they see necessary, in order to check any pass of such vessel, any person who shall obstruct and prevent any officer in such discharge of his duty, shall be subject to a penalty not less than ten pounds.

Every vessel navigating any of the canals, shall be supplied with a horn, bell or steam whistle, which it shall be the duty of the person in charge to cause to be sounded at least one quarter of a mile before entering any canal or lock, or passing any swing bridge, under a penalty of not less than ten shillings, and not exceeding five pounds.





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Every vessel navigating any of the canals, whether under way or at anchor, or passing through any lock, or lying moored in any canal, shall, during the night, show a conspicuous light at the bow and stern, and the person in charge of any such vessel who shall neglect to cause such lights to be shown, shall incur a penalty of not less than twenty shillings, and not exceeding ten pounds.

It shall be the duty of every master or person in charge of any steamboat or vessel, on approaching any lock or bridge, to ascertain for themselves by careful observation, whether the lock or bridge is ready to receive them, or allow them to pass through, and to be careful to stop the speed of any such vessel in time to avoid a collision with the locks or gates, and should such take place, the owner or master of such vessel, shall be subject to such fine as the Superintendent may impose, not exceeding 36 pounds, and also be held liable for any damage done to the works; such damage to be estimated by the Superintendent of the Canal, and at once paid over to the Collector of Tolls, or security given for the amount.

Any person in charge of any vessel, shall, when required to do so by any officer duly authorized on that behalf, promptly and with all diligence, move such vessel to any place where the officer shall direct, for the purpose of repairs, and for uninterrupted navigation of the canal, under a penalty not exceeding ten pounds.

All vessels navigating any canal, shall have their yards topped or braced up, so as not to extend athwart ships further than the side of the vessel; their booms, bowsprits, jibbooms, and all outriggers, rigged in or topped up, and their anchors secured so as to avoid doing damage to any of the locks, bridges, or other works, or vessels, under a penalty against the owner, or person in charge, not exceeding ten pounds, currency.

No person in charge of any vessel, navigating any canal, shall cast anchor in the same, or in the channel leading thereto, nor moor any vessel, nor discharge any cargo, or take in any wood, without the permission of the Superintendent, under a penalty of not less than twenty shillings, nor exceeding ten pounds, currency.

No person shall build or repair vessels, on any canal ground, unless with the permission of, and at such places as the Superintendent may point out; and the master of any vessel, or person whatsoever, who shall boil or heat tar, pitch, turpentine, rosin or grease, for graving or paying vessels, or for any other purposes on any canal ground, without permission, shall incur a like penalty of not less than twenty shillings nor exceeding five pounds, currency.

No pile pole or other instrument shed with iron, shall be used in or about the locks or in the canals, under a penalty of twenty shillings against the persons offending.

In all cases of vessels loaded with lumber, it must be so stowed as not to project beyond the gunnel of the vessel, under a penalty of not less than fifty shillings, and not exceeding ten pounds.

When several vessels are lying by, or in waiting to enter any lock, or to enter any canal, they shall lie in single tier, and at a distance of not less than 200 feet from such lock or entrance, under a penalty of not less than twenty shillings, nor more than 10 pounds. All steam vessels whatsoever shall have priority over sailing craft in being passed through the entrance locks at Port Dalhousie, Port Colborne and Fort Maitland, and the lock at Allanburg.

All vessels approaching a lock, while any other vessel, going in the contrary direction, is in or about to enter the same, shall be "topped and made fast to the posts placed for that purpose, on the off side from the track-way, and remain there until the vessel, going through the lock, shall have passed, under a penalty of not less than twenty shillings, nor more than five pounds.

In all cases of vessels meeting in any of the canals, the vessel descending the canal shall keep the tow path, the ascending vessel passing to the off side; and when any vessel, navigating any canal, shall overtake another vessel which shall not be moving at the same rate of speed, the vessel so overtaken shall bring up and lie to on the off side, at the first convenient place, in order to allow the swifter vessel to pass by, under a penalty of not less than ten shillings, nor more than one hundred shillings.

Every vessel navigating the canals, shall be provided with at

least two good and sufficient hawsers or check ropes, one at the bow and one at the quarter, which on passing any lock are to be made fast to the snubbing post on the bank of the lock, and each rope to be attended by one of the boat crew, to check the speed of the vessel while entering the lock, and to prevent it striking against the gates or other parts of the lock, and to keep it from moving about in the lock while the lock is being filled or emptied; and the master or owner of any vessel who shall neglect to comply with this regulation, shall be liable to a fine not exceeding ten pounds, and the vessel shall not be permitted to pass if in the opinion of the officer duly appointed, the lines are considered insufficient.

Whenever any vessel shall be passing through any lock or bridge, the master or person in charge shall furnish two at least of his boat crew to assist in working the lock or bridge, and the refusal or neglect of such person in charge so to do, shall subject the person in charge to a fine of not less than ten shillings, nor more than fifty shillings.

All vessels as aforesaid, shall be held liable for any injury or damage they may do to any locks, bridges, etc., whether the same arise from the fault, neglect or mis-management of the master or person in charge, or from his inattention to the Canal Regulations, or from accident, and every penalty which may be duly imposed, under these regulations, or any officer, and declared in these regulations as against the owner, master, or person in charge of any vessel, as aforesaid, whether the same be for non-payment of tolls, or for any fine duly imposed, or for any sum demanded by the Superintendent, or person in charge of any canal, as compensation for any injury done, shall be chargeable upon such vessel; and the Superintendent of the canal is authorized and required to seize and detain any such vessel, with her cargo and appurtenances, at the risk of the owner or owners, until payment of such tolls, penalty or compensation as aforesaid, or security given, within thirty days after any such penalty or compensation as aforesaid has been declared or demanded, and in default shall proceed to sell by public auction, any such vessel, after having first given two weeks' notice of the day of

such intended sale, such notice to be inserted in one or more of the public newspapers, published in or near the place where such notice was made, at least two clear weeks prior to the day of sale.

Any vessel that shall incur any fine, or do any injury upon any one of the Provincial Canals, may be stopped and detained upon any other of the Provincial Canals, until the fine or compensation for injury done shall be paid, or until security be given.

No vessel entering at either terminus of the Welland Canal, and drawing—either with or without a cargo—more than ten feet of water, shall be permitted to pass, or enter any of the locks; and all lock-keepers are required to enforce this regulation, with the view of keeping open and the free navigation of the canal.

MISCELLANEOUS INFORMATION.

The following changes of lights, in the various places mentioned below, took effect on the opening of navigation, 1871, viz:—

Lake Huron.

The light at Detour, at the mouth of River deslits Ste. Marie, is a light of the third order.

Presqu'île—A fixed white light will be shown from a tower recently built at the northern end of the peninsula of Presqu'île, Lake Huron. The illuminating apparatus is a lens of the 3rd order. The focal plane is at a height of 125 feet above the level of the Lake, and in clear weather the light should be seen from the deck of a vessel at a distance of 19 statute miles. The building consist of a tower of red brick, with a keeper's dwelling of Milwaukee brick attached. Simultaneously with the exhibition of this light, that now shown on the southeastern point of the peninsula, at the entrance to the harbor of Presqu'île, will be discontinued.

LOBLEY ISLAND.—The Dominion Government has erected a

Lighthouse on Lundy Island, Georgian Bay. It is a fixed white light, 185 feet above water level, visible in clear weather 20 miles distant, and from all points of approach. First shown October, 1876. The building is a square tower, wood, painted white, with keeper's dwelling. The light will be shown during navigation season from sunset to sunrise.

MICHAEL'S POINT.—Another lighthouse has been built on Michael's Point, a north side of Grand Manitowish Island, by the same government. It is a fixed white light, 40 feet above water level, illuminating apparatus one powerful lamp, visible 10 miles distant in clear weather, and shows from all points. Tower square, white, and of wood. Light first shown October 1st, 1876.

MINN ISLAND.—A lighthouse has recently been erected by the government of Canada on Minn Island, at the entrance to Parry Sound Harbor, Georgian Bay, Lake Huron, latitude 46 deg. 23 00 north, longitude 90 deg. 13 45 west. The light is a fixed white light, elevated 55 feet above the level of the water, and in clear weather should be seen from a distance of 16 miles. It is visible from all points of approach. The illuminating apparatus is catoptric, consisting of four powerful lamps with reflectors. The building is a square tower, surmounting the keeper's dwelling house, all built of wood and painted white. The height of the building from base to vane is 46 feet.

Lake Michigan.

The light at Skillingalee is changed to white; the pier light at St. Joseph is changed to white; the light at Waukegan to a 5th order; the light at Port Washington to a 4th order.

Pere Marquette.—A fixed red light is shown from a skeleton tower of wood, painted white, recently erected on the outer end of the south pier at the harbor of Pere Marquette, (Ludington), Michigan. The illuminating apparatus is a lens of the 5th order. The focal plane is at a height of 55 feet above the level of the lake, and in clear weather the light should be visible from the deck of a vessel at a distance of 11 statute miles.

Holland—Black Lake.—A fixed red light is shown from a skeleton tower of wood, painted white, recently erected on the

outer end of the south pier at the harbor of Holland, Michigan. The illuminating apparatus is a lens of the 4th order. The focal plane is at a height of 54 feet above the level of the lake, and in clear weather the light should be visible from the deck of a vessel at a distance of 11 statute miles.

The light at Beaver Island Harbor to a 4th order red.

The light at Point Pinosuak to a 4th order revolving light.

The light at Resolute to white.

Lake Superior.

The light at Point Iroquois to a 4th order revolving.

The light at Mendota Harbor, (La la Belle,) Lake Superior, has been discontinued.

The arc of illumination of the light at Marquette is increased from 180 to 270 degrees.

CHAMBERS' ISLAND LIGHT.—Green Bay.—The trees have been cut from the western side of Chambers' Island, so that the light may be seen from Green Island Lighthouse.

PORT CLINTON LIGHTHOUSE.—In obedience to instructions from the Department, the lighthouse at Port Clinton has been discontinued and the apparatus removed.

PORT BURWELL LIGHT.—On and after the 1st day of May, 1871, the lighthouse on the west pier at Port Burwell Harbor will show a white light instead of a red one as heretofore. The light has been removed to within 10 feet of the end of the pier.

HOW TO RUN CHICAGO HARBOR.—Vessels entering the harbor should come in midway between the piers, or if anything a little closer to the north pier. By following these instructions, from 18½ to 16 feet of water will be found.

VESSELS IN DISTRESS.—According to the decision of Judge Drummond (Canada,) delivered recently, vessels rendering assistance to craft in distress, and meeting disaster in so doing, can recover insurance, providing suit is brought within one year.

BEACONS.—Fog signals will be stationed at the following points on the upper lakes, viz: Thunder Bay Island, Whitefish Point,

Detroit, Waukegan, Milligan, McFarlin's Point, Granite Island, Fort Gratiot, French Isle, Huron Island and Manitow Island Lighthouses.

THE RIVER TRAMPS.—The Lighthouse keeper has buoyed the channel at the mouth of the river Thames, having placed a large white buoy at each end of the new cut, in such a position that vessels going out will have to keep them on the port hand, and vessels coming in on the starboard hand. These, along with the range lights and deep water, will enable the largest steamers and sailing vessels to enter in safety.

MILWAUKEE LIGHT, ON PIER.—On the opening of navigation (1871,) the light on the pier called the "North End" will be exhibited as a fixed red light, instead of, as previously, a white light. Navigators are reminded that the light at the north point of Milwaukee Bay is and remains a fixed white light varied by flashes, and that this latter light is designed to mark the approach to the Bay, while the light on the Pier is designed to guide between the two piers into the harbor.

Oswego Harbor Regulations.

The following are extracts from the Rules and Regulations governing the Harbor of Oswego:—

Every Captain, Master, Owner, Consignee or Person having in charge any steamboat, vessel, or other craft or boat, neglecting or refusing to comply with any orders or directions, shall forfeit and pay the sum of not less than \$10, nor more than \$50, for each and every such neglect or refusal; and such penalty shall be a charge upon the steamboat, canal boat or other vessel, craft or boat, the Captain, Master, Owner, Consignee or Person in charge of which is liable therefor. And in default of payment thereof within twenty-four hours after the same have accrued, the said craft, boat or vessel may be sold by the Harbor Master, at public vendue, on three day's notice in the official paper of the city.

All steamboats, brigs and other vessels, while lying in Oswego Harbor, shall have their anchors kept in board upon deck, and their upper yards braced up sharp, and their lower yards con-
billed, failing to do which, the owners or officers of such steam-
boats, brigs or other vessels, shall forfeit for the use of the City
of Oswego, the sum of \$10 for each and every offence.

Every steamboat, brig, schooner, sloop, float or canal boat,
lying at or making fast to any public wharf or landing, shall pay
the following rates of wharfage, viz:—

A steamboat, one dollar and fifty cents, and may remain eight
hours, with the privilege of wooding; for every subsequent four
hours, 50 cents, unless detained by stress of weather, of which
the Harbor Master shall judge—in such case, one dollar for every
24 hours. A brig, schooner, sloop or float of 100 tons or upwards,
\$1, and may remain 24 hours; for every subsequent 24 hours, 50
cents; if under 100 and over 50 tons, 75 cents; under 50 tons, 25
cents; canal boats, 50 cents for 24 hours. Every brig, schooner,
sloop, float or canal boat shall be exempt from the foregoing
rates while lying unemployed and light for the first 24 hours,
and for every subsequent 24 hours shall pay one-half of the fore-
going rates.

No boats or vessels of any description shall be permitted to lie
adjoining the wharf on either side of the island, at the mouth of
the Oswego River, more than two abreast; nor shall they be
permitted to lie in either channel, so as to obstruct the passage
through the same of vessels entering or passing out of the Har-
bor or river, under the penalty of \$10 for each offence, to be re-
covered of the master, or owners thereof, or of any other person
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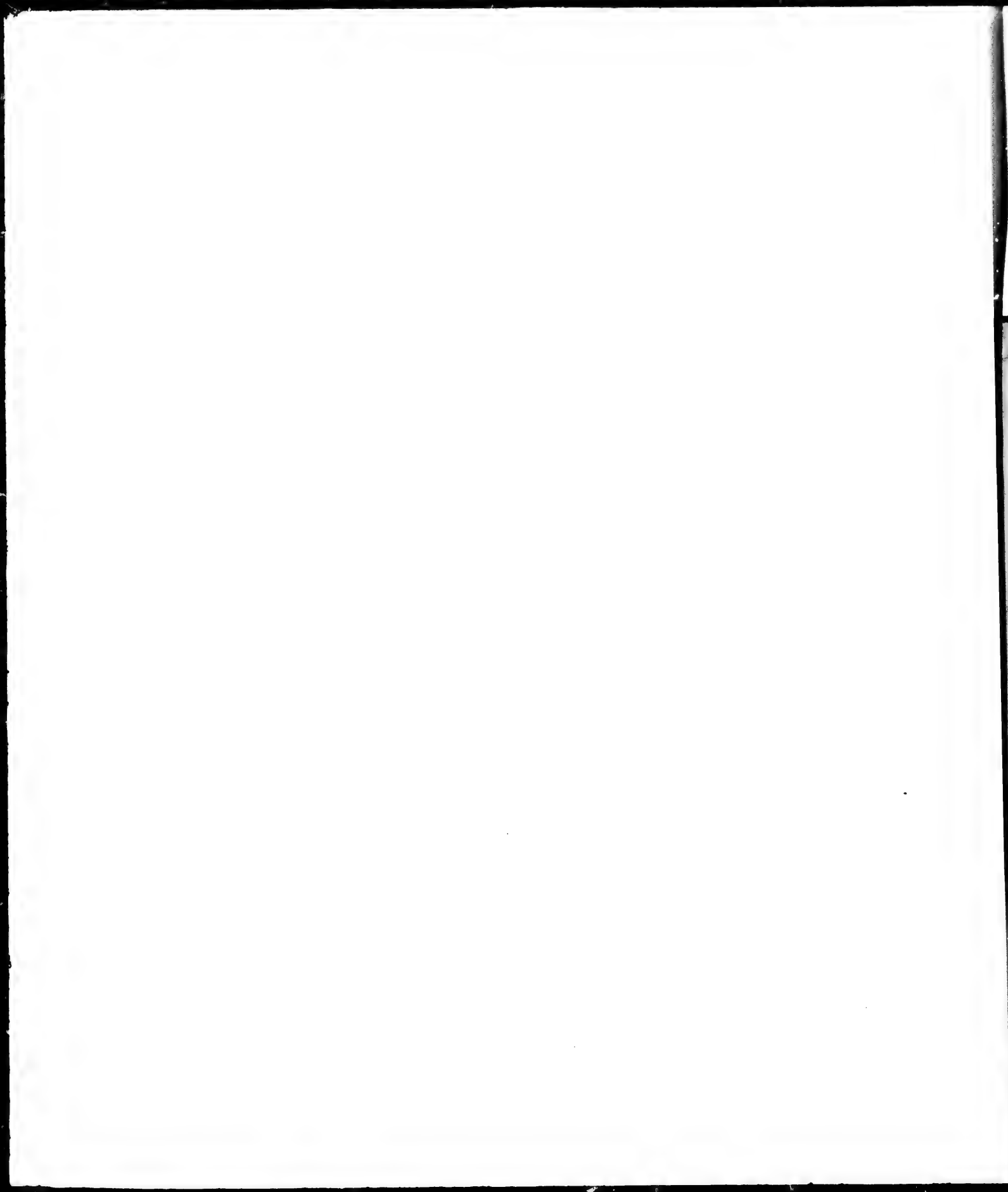
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